





Maintenance

Heading

1. Engine Overview
2. Service Work
3. General Information
4. Procedure Descriptions
5. Emissions Test
6. Glossary

Technical information should always be available to the foremen and mechanics, because their careful and constant adherence to the instructions is essential to ensure vehicle road-worthiness and safety. In addition, the normal basic safety precautions for working on motor vehicles must, as a matter of course, be observed.

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1 Engine Overview

(Edition 04.2021)

MEX5R0061.21 -- 4/14/2022 - C.R. Tool check

Gasoline and diesel engines are listed separately.

The engine codes are listed in alphabetical order.

- ◆ Gasoline Engines. Refer to ➤ [page 1](#) .
- ◆ Diesel Engines. Refer to ➤ [page 7](#) .
- ◆ Gasoline/Hybrid Engine. Refer to ➤ [page 7](#) .

Gasoline Engines

Engine Code Refer to ➤ C3.11 ode and Engine Identification , page 65 .	AXX	BGP	BGQ
Displacement specified in liter	2.0	2.5	2.5
Number of cylinders	4	5	5
Valves per cylinder	4	4	4
Output/kW at RPM	147/5700	110/5200	110/5200
Torque/Nm at RPM	280/2000	228/4000	228/4000
Compression ratio	10.5	9.5	9.5
Injection/Ignition	MPI Bosch Motronic T-FSI	MPI Bosch Motronic SRE	MPI Bosch Motronic SRE
RON unleaded, minimum	95 also 91 RON, but with reduced performance	91 also 87 RON, but with reduced performance	91 also 87 RON, but with reduced performance
Camshaft drive	Toothed Belt	Timing chain	Timing chain

Gasoline Engines

Engine Code Refer to ➤ C3.11 ode and Engine Identification , page 65 .	BLG	BLF	BLR
Displacement specified in liter	1.4	1.6	2.0
Number of cylinders	4	4	4
Valves per cylinder	4	4	4
Output/kW at RPM	125/6000	85/5800	110/6000
Torque/Nm at RPM	240/1750 to 4500	155/4000	200/3500
Compression ratio	10.0	12.0	11.5
Injection/Ignition	Motronic MED 9.5.10 TSI Twincharger	Motronic MED 9.5.10 FSI	Motronic MED 9.5.10 FSI
RON unleaded, minimum	95 also 91 RON, but with reduced performance	98 also 95 RON, but with reduced performance	95 also 91 RON, but with reduced performance
Camshaft drive	Timing chain	Timing chain	Toothed Belt



Gasoline Engines

Engine Code Refer to ➤ C3.11 ode and Engine Identification , page 65 .	BMV	BLV	BSE
Displacement specified in liter	1.4	2.0	1.6
Number of cylinders	4	4	4
Valves per cylinder	4	4	2
Output/kW at RPM	103/5600	110/6000	75/5600
Torque/Nm at RPM	220/2000 to 4000	200/3500	148/3800
Compression ratio	10	10.5	10.5
Injection/Ignition	Motronic MED 9.5.10 (17.5.1) TSI Twincharger	Motronic MED 9.5.10 FSI	SIMOS 7.1 SRE
RON unleaded, minimum	95 also 91 RON, but with reduced performance	95 also 91 RON, but with reduced performance	95 also 91 RON, but with reduced performance
Camshaft drive	Timing chain	Toothed Belt	Toothed Belt

Gasoline Engines

Engine Code Refer to ➤ C3.11 ode and Engine Identification , page 65 .	BSF	BPV	BTK
Displacement specified in liter	1.6	2.0	2.5
Number of cylinders	4	4	5
Valves per cylinder	2	4	4
Output/kW at RPM	75/5600	147/5700	110/5200
Torque/Nm at RPM	148/3800	280/2000	228/4000
Compression ratio	10.5	10.5	9.5
Injection/Ignition	SIMOS 7.1 SRE	MPI Bosch Motronic T-FSI	MPI Bosch Motronic SRE
RON unleaded, minimum	95 also 91 RON, but with reduced performance	95 also 91 RON, but with reduced performance	91 also 87 RON, but with reduced performance
Camshaft drive	Toothed Belt	Toothed Belt	Timing chain

Gasoline Engines

Engine Code Refer to ➤ C3.11 ode and Engine Identification , page 65 .	BUD	BVY	BVZ
Displacement specified in liter	1.4	2.0	2.0
Number of cylinders	4	4	4
Valves per cylinder	4	4	4
Output/kW at RPM	59/5000	110/6000	110/6000
Torque/Nm at RPM	130/4200	200/3500	200/3500
Compression ratio	10.5	11.5	10.5



Engine Code Refer to ➤ C3.11 ode and Engine Identification , page 65 .	BUD	BVY	BVZ
Displacement specified in liter	1.4	2.0	2.0
Injection/Ignition	4VH SRE	MPI Bosch Motronic FSI	MPI Bosch Motronic FSI
RON unleaded, minimum	95 also 91 RON, but with reduced performance	95 also 91 RON, but with reduced performance	95 also 91 RON, but with reduced performance
Camshaft drive	Toothed Belt	Toothed Belt	Toothed Belt

Gasoline Engines

Engine Code Refer to ➤ C3.11 ode and Engine Identification , page 65 .	BWA	CAVD	CAWB
Displacement specified in liter	2.0	1.4	2.0
Number of cylinders	4	4	4
Valves per cylinder	4	4	4
Output/kW at RPM	147/5700	118/5800	147/5100 to 6000
Torque/Nm at RPM	280/2000	240/1500 to 4000	280/1700 to 5000
Compression ratio	10.5	10	10.3
Injection/Ignition	MPI Bosch Motronic T-FSI	Motronic MED 17.5.10 TSI Twin Charger	Motronic MED 17.1 TSI Turbocharger
RON unleaded, minimum	95 also 91 RON, but with reduced performance	95 also 91 RON, but with reduced performance	95 also 91 RON, but with reduced performance
Camshaft drive	Toothed Belt	Timing chain	Timing chain

Gasoline Engines

Engine Code Refer to ➤ C3.11 ode and Engine Identification , page 65 .	CAXA	CBFA	CBPA
Displacement specified in liter	1.4	2.0	2.0
Number of cylinders	4	4	4
Valves per cylinder	4	4	2
Output/kW at RPM	90/5600	147/5100 to 6000	85/5200
Torque/Nm at RPM	210/1750 to 4500	280/1700 to 5000	170/2600
Compression ratio	10	10.3	10.3
Injection/Ignition	Motronic MED 17.5.20 TSI Turbocharger	Motronic MED 17.1 TSI Turbocharger	Bosch Motronic MPI
RON unleaded, minimum	95 also 91 RON, but with reduced performance	95 also 91 RON, but with reduced performance	91 also 87 RON, but with reduced performance
Camshaft drive	Timing chain	Timing chain	Toothed Belt



Gasoline Engines

Engine Code Refer to ➤ C3.11 ode and Engine Identification , page 65.	CBTA	CBUA	CBZA
Displacement specified in liter	2.5	2.5	1.2
Number of cylinders	5	5	4
Valves per cylinder	4	4	2
Output/kW at RPM	125/5700	125/5700	63/4800
Torque/Nm at RPM	240/4250	240/4250	160/1500 to 3500
Compression ratio	9.5	9.5	10.0
Injection/Ignition	MPI Bosch Motronic SRE	MPI Bosch Motronic SRE	--- ¹⁾
RON unleaded, minimum	91 also 87 RON, but with reduced performance	91 also 87 RON, but with reduced performance	95
Camshaft drive	Timing chain	Timing chain	Timing chain

1) Information not available at the time of printing.

Gasoline Engines

Engine Code Refer to ➤ C3.11 ode and Engine Identification , page 65.	CBZB	CCCA	CCSA
Displacement specified in liter	1.2	2.5	1.6
Number of cylinders	4	5	4
Valves per cylinder	2	4	2
Output/kW at RPM	77/5000	125/5000	75/5600
Torque/Nm at RPM	175/1500 to 3500	240/--- ²⁾	148/3800
Compression ratio	10.0	10.0	10.5
Injection/Ignition	SIMOS 10.1 TSI	MPI Bosch Motronic SRE	SIMOS 7.1 SRE Flex Fuel
RON unleaded, minimum	95	91 also 87 RON, but with reduced performance	95 also 91 RON, but with reduced performance
RON Ethanol 85	---	---	104
Camshaft drive	Timing chain	Timing chain	Toothed Belt

2) Information not available at the time of printing.

Gasoline Engines

Engine Code Refer to ➤ C3.11 ode and Engine Identification , page 65.	CCTA	CCZA	CFNA
Displacement specified in liter	2.0	2.0	1.6
Number of cylinders	4	4	4
Valves per cylinder	4	4	4



Engine Code Refer to ➤ C3.11 ode and Engine Identification", page 65 .	CCTA	CCZA	CFNA
Displacement specified in liter	2.0	2.0	1.6
Output/kW at RPM	147/5100 to 6000	147/5100 to 6000	77/5600
Torque/Nm at RPM	280/1700 to 5000	280/1700 to 5000	153/3800
Compression ratio	10.2	9.6	10.5
Injection/Ignition	Motronic MED 17.5 TSI Turbocharger	Motronic MED 17.1 TSI Turbocharger	MPI Magneti Marelli
RON unleaded, minimum	95 also 91 RON, but with reduced performance	98	95
Camshaft drive	Timing chain	Timing chain	Timing chain

Gasoline Engines

Engine Code Refer to ➤ C3.11 ode and Engine Identification", page 65 .	CGGA	CKJA	CLRA
Displacement specified in liter	1.4	2.0	1.6
Number of cylinders	4	4	4
Valves per cylinder	4	4	4
Output/kW at RPM	59/5000	85/5200	77/5400
Torque/Nm at RPM	130/4200	174/4000	153/3800
Compression ratio	10.5	11.5	10.5
Injection/Ignition	Magneti Marelli 4HV SRE	3)	MPI Bosch Motronic SRE
RON unleaded, minimum	95	3)	95
RON Ethanol 85	---	---	---
Camshaft drive	Toothed Belt	Timing chain	Timing chain

3) Information not available at the time of printing.

Gasoline Engines

Engine Code Refer to ➤ C3.11 ode and Engine Identification", page 65 .	CMXA	CNWA	CPKA
Displacement specified in liter	1.6	1.4	1.8
Number of cylinders	4	4	4
Valves per cylinder	2	4	4
Output/kW at RPM	75/5600	118/5800	125/4800
Torque/Nm at RPM	148/3800	240/1750 to 4500	250/1500 to 4750
Compression ratio	10.3	10.0	9.6
Injection/Ignition	4)	Motronic MED 17.5.5 TSI Twin Charger	Motronic MED 17.5 TSI Turbocharger
RON unleaded, minimum	95	95	95
RON Ethanol 85	---	---	---



Engine Code Refer to ➤ C3.11 ode and Engine Identification , page 65 .	CMXA	CNWA	CPKA
Displacement specified in liter	1.6	1.4	1.8
Camshaft drive	Toothed Belt	Timing chain	Timing chain

4) Information not available at the time of printing.

Gasoline Engines

Engine Code Refer to ➤ C3.11 ode and Engine Identification , page 65 .	CPLA	CPPA	CPRA
Displacement specified in liter	2.0	2.0	1.8
Number of cylinders	4	4	4
Valves per cylinder	4	4	4
Output/kW at RPM	155/5300	155/5300	125/4800
Torque/Nm at RPM	280/1700 to 5200	280/1700 to 5200	250/1500 to 4750
Compression ratio	9.6	9.6	9.6
Injection/Ignition	Motronic MED 17.5 TSI Turbocharger	Motronic MED 17.5 TSI Turbocharger	Motronic MED 17.5 TSI Turbocharger
RON unleaded, minimum	95	95	95
RON Ethanol 85	---	---	---
Camshaft drive	Timing chain	Timing chain	Timing chain

Gasoline Engines

Engine Code Refer to ➤ C3.11 ode and Engine Identification , page 65 .	CTHA	CTHD
Displacement specified in liter	1.4	1.4
Number of cylinders	4	4
Valves per cylinder	4	4
Output/kW at RPM	110/5800	118/5800
Torque/Nm at RPM	240/1500 to 4000	240/1500 to 4500
Compression ratio	9.7	9.7
Injection/Ignition	Motronic MED 17.5.5 TSI Twin Charger	Motronic MED 17.5.5 TSI Twin Charger
RON unleaded, minimum	95	95
RON Ethanol 85	---	---
Camshaft drive	Timing chain	Timing chain



Gasoline/Hybrid Engine

Engine Code Refer to ➤ C3.11 ode and Engine Identification , page 65 .	CNLA	CRJA
Displacement specified in liter	1.4	1.4
Number of cylinders	4	4
Valves per cylinder	4	4
Output/kW at RPM	110/5000	110/5000
Torque/Nm at RPM	250/1400 to 3500	250/1400 to 3500
Compression ratio	10.5	10.5
Injection/Ignition	Motronic MED 17.1.21 TSI Turbocharger	Motronic MED 17.1.21 TSI Turbocharger
RON unleaded, minimum	95	95
RON Ethanol 85	--- ⁵⁾	--- ⁵⁾
Camshaft drive	Toothed Belt	Toothed Belt

5) Information not available at the time of printing.

Diesel Engines

Engine Code Refer to ➤ C3.11 ode and Engine Identification , page 65 .	AZV	BKC	BKD
Displacement specified in liter	2.0	1.9	2.0
Number of cylinders	4	4	4
Valves per cylinder	4	2	4
Output/kW at RPM	100/4000	77/4000	103/4000
Torque/Nm at RPM	320/1750 to 2500	250/1900	320/1750 to 2500
Compression ratio	18.5	19.0	18.5
Injection/Ignition	Pump Injector Unit:	Pump Injector Unit:	Pump Injector Unit:
Fuel according to	German Industry Standardization EN 590	German Industry Standardization EN 590	German Industry Standardization EN 590
Diesel particulate filter	No	No	No
Camshaft drive	Toothed Belt	Toothed Belt	Toothed Belt

Diesel Engines

Engine Code Refer to ➤ C3.11 ode and Engine Identification , page 65 .	BLS	BMN	BMM. Refer to ⁶⁾ .
Displacement specified in liter	1.9	2.0	2.0
Number of cylinders	4	4	4
Valves per cylinder	2	4	2
Output/kW at RPM	77/4000	125/4200	103/4000
Torque/Nm at RPM	250/1900	350/1800	320/1750 to 2500
Compression ratio	19.0	18.5	18.5



Engine Code Refer to ➤ C3.11 ode and Engine Identification , page 65.	BLS	BMN	BMM. Refer to ⁶⁾ .
Displacement specified in liter	1.9	2.0	2.0
Injection/Ignition	TDI Pump Injector Unit	TDI Pump Injector Unit	TDI Pump Injector Unit
Fuel according to	German Industry Standardization EN 590	German Industry Standardization EN 590	German Industry Standardization EN 590
Diesel particulate filter	yes. Refer to ⁷⁾ .	yes. Refer to ⁷⁾ .	yes. Refer to ⁷⁾ .
Camshaft drive	Toothed Belt	Toothed Belt	Toothed Belt

6) Must not be driven with RME biodiesel!

7) With fuel with increased sulfur content, the service life of the diesel particulate filter can be reduced.

Diesel Engines

Engine Code Refer to ➤ C3.11 ode and Engine Identification , page 65.	BRM. Refer to ⁸⁾ .	BXE. Refer to ⁸⁾ .	CAYB
Displacement specified in liter	1.9	1.9	1.6
Number of cylinders	4	4	4
Valves per cylinder	2	2	4
Output/kW at RPM	74/4000	77/4000	66/4200
Torque/Nm at RPM	250/1900	250/1900	230/1500 to 2500
Compression ratio	19.0	19.0	16.5
Injection/Ignition	TDI Pump Injector Unit	TDI Pump Injector Unit	TDI Common Rail
Fuel according to	German Industry Standardization EN 590	German Industry Standardization EN 590	German Industry Standardization EN 590
Diesel particulate filter	No	No	yes. Refer to ⁹⁾ .
Camshaft drive	Toothed Belt	Toothed Belt	Toothed Belt

8) Must not be driven with RME biodiesel!

9) With fuel with increased sulfur content, the service life of the diesel particulate filter can be reduced.



Note

Vehicles with a retrofitted diesel particulate filter are assigned in the table under diesel engines without diesel particulate filter. A vehicle equipped with a factory-installed diesel particulate filter will have PR number 7GG listed on the vehicle data label.

Diesel Engines

Engine Code Refer to ➤ C3.11 ode and Engine Identification , page 65.	CAYC	CBDA. Refer to ¹⁰⁾ .	CBDB. Refer to ¹⁰⁾ .
Displacement specified in liter	1.6	2.0	2.0
Number of cylinders	4	4	4



Engine Code Refer to ➤ C3.11 Code and Engine Identification , page 65.	CAYC	CBDA. Refer to ¹⁰⁾ .	CBDB. Refer to ¹⁰⁾ .
Displacement specified in liter	1.6	2.0	2.0
Valves per cylinder	4	4	4
Output/kW at RPM	77/4400	100/4200	103/4200
Torque/Nm at RPM	250/1500 to 2500	320/1750 to 2500	320/1750 to 2500
Compression ratio	16.5	18.5	18.5
Injection/Ignition	TDI Common Rail	TDI Common Rail	TDI Common Rail
Fuel according to	German Industry Standardization EN 590	German Industry Standardization EN 590	German Industry Standardization EN 590
Diesel particulate filter	no (EU3) / yes (EU5). Refer to ¹¹⁾ .	yes. Refer to ¹¹⁾ .	yes. Refer to ¹¹⁾ .
Camshaft drive	Toothed Belt	Toothed Belt	Toothed Belt

10) Must not be driven with RME biodiesel!

11) With fuel with increased sulfur content, the service life of the diesel particulate filter can be reduced.



Note

Vehicles with a retrofitted diesel particulate filter are assigned in the table under diesel engines without diesel particulate filter. A vehicle equipped with a factory-installed diesel particulate filter will have PR number 7GG listed on the vehicle data label.

Diesel Engines

Engine Code Refer to ➤ C3.11 Code and Engine Identification , page 65.	CBEA. Refer to ¹²⁾ .	CEGA	CFFB
Displacement specified in liter	2.0	2.0	2.0
Number of cylinders	4	4	4
Valves per cylinder	4	4	4
Output/kW at RPM	103/4000	125/4200	103/4200
Torque/Nm at RPM	320/1750 to 2500	350/1750 to 2500	320/1750 to 2500
Compression ratio	18.5	16.5	16.0
Injection/Ignition	TDI Common Rail	TDI Common Rail	TDI Common Rail
Fuel according to	German Industry Standardization EN 590	German Industry Standardization EN 590	German Industry Standardization EN 590
Diesel particulate filter	yes. Refer to ¹³⁾ .	yes. Refer to ¹³⁾ .	yes. Refer to ¹³⁾ .
Camshaft drive	Toothed Belt	Toothed Belt	Toothed Belt

12) Must not be driven with RME biodiesel!

13) With fuel with increased sulfur content, the service life of the diesel particulate filter can be reduced.



Note

Vehicles with a retrofitted diesel particulate filter are assigned in the table under diesel engines without diesel particulate filter. A vehicle equipped with a factory-installed diesel particulate filter will have PR number 7GG listed on the vehicle data label.

Diesel Engines

Engine Code Refer to ➤ C3.11 ode and Engine Identification , page 65 .	CFHB	CFHC	CJAA
Displacement specified in liter	2.0	2.0	2.0
Number of cylinders	4	4	4
Valves per cylinder	4	4	4
Output/kW at RPM	100/4200	103/4200	103/4000
Torque/Nm at RPM	320/1750 to 2500	320/1750 to 2500	320/1750 to 2500
Compression ratio	16.5	16.5	16.5
Injection/Ignition	TDI Common Rail	TDI Common Rail	TDI Common Rail
Fuel according to	German Industry Standardization EN 590	German Industry Standardization EN 590	German Industry Standardization EN 590
Diesel particulate filter	yes. Refer to ¹⁴⁾ .	yes. Refer to ¹⁴⁾ .	yes. Refer to ¹⁴⁾ .
Camshaft drive	Toothed Belt	Toothed Belt	Toothed Belt

14) Must not be driven with RME biodiesel!

15) With fuel with increased sulfur content, the service life of the diesel particulate filter can be reduced.



Note

Vehicles with a retrofitted diesel particulate filter are assigned in the table under diesel engines without diesel particulate filter. A vehicle equipped with a factory-installed diesel particulate filter will have PR number 7GG listed on the vehicle data label.

Diesel Engines

Engine Code Refer to ➤ C3.11 ode and Engine Identification , page 65 .	CLCA	CLCB
Displacement specified in liter	2.0	2.0
Number of cylinders	4	4
Valves per cylinder	4	4
Output/kW at RPM	81/4200	103/4000
Torque/Nm at RPM	250/---. Refer to ¹⁸⁾ .	320/1750 to 2500
Compression ratio	16.5	16.5
Injection/Ignition	TDI Common Rail	TDI Common Rail
Fuel according to	German Industry Standardization EN 590	German Industry Standardization EN 590



Engine Code Refer to ⇒ C3.11 ode and Engine Identification", page 65 .	CLCA	CLCB
Displacement specified in liter	2.0	2.0
Diesel particulate filter	--	--
Camshaft drive	Toothed Belt	Toothed Belt

16) Must not be driven with RME biodiesel!

17) With fuel with increased sulfur content, the service life of the diesel particulate filter can be reduced.

18) Information not available at the time of printing.



Note

Vehicles with a retrofitted diesel particulate filter are assigned in the table under diesel engines without diesel particulate filter. A vehicle equipped with a factory-installed diesel particulate filter will have PR number 7GG listed on the vehicle data label.





2 Service Work

⇒ [a2.1 nd Fixed Service Information", page 12](#)

⇒ [T2.2 ables for Market Designation A", page 20](#)

⇒ [T2.3 ables for Market Designation B and C, Not for North America Market", page 36](#)

Country Assignment According to Market Designation. Refer to
⇒ [A3.9 ssignment According to Market Designation", page 63](#) .

Pre-Delivery Inspection. Refer to ⇒ [I2.3.1 nspection", page 36](#) .

Services. Refer to ⇒ [2.3.2 , page 37](#) .

2.1 Flexible and Fixed Service Information

⇒ [I2.1.1 dentification", page 12](#)

⇒ [S2.1.2 ervice", page 12](#)

⇒ [S2.1.3 ervice", page 13](#)

⇒ [I2.1.4 nterval Display", page 14](#)

2.1.1 Service Identification

- See if the vehicle is equipped with the following PR numbers using the vehicle data label. Refer to ⇒ [D3.7 ata Label", page 61](#) .

The PR number determines the service intervals. Refer to ⇒
[T2.2 ables for Market Designation A", page 20](#) .

Vehicle with the following PR number

Model year	PR Number	Service
Through MY 2012	QG1	Flexible service
Through MY 2012	QG0, QG2 and QG3	Fixed service
From MY 2013	QI6	Flexible service
From MY 2013	QI1, QI2, QI3, QI4 and QI7	Fixed service

2.1.2 Flexible Service

Flexible service makes it possible to have extended service intervals, depending on individual driving habits and operating conditions.



Note

Special LongLife engine oil is required for flexible service. Refer to ⇒ [T2.2 ables for Market Designation A", page 20](#) .

Vehicles with PR numbers "QG1" or "QI6" are equipped with flexible service at the factory. This means that these vehicles have a flexible service interval display and are equipped with the following components:

- ◆ Flexible service interval display inside the instrument cluster
- ◆ Engine oil level sensor
- ◆ Brake pad wear indicator, if equipped



On vehicles with flexible service, a control module determines the service interval and informs the driver via the service interval display. Refer to [⇒ I2.1.4 Interval Display](#), page 14 .

The service intervals therefore called flexible.

2.1.3 Fixed Service

Vehicles with fixed service are programmed with fixed service intervals. This means that the specified distance or time values are determined by Volkswagen beforehand and are fixed. Under ordinary operating conditions, this technically assures that the service will be performed when these intervals are reached.

The service intervals are therefore called fixed.

For vehicles

- ◆ That were delivered without the service interval extension (PR numbers "QG0", "QG2", "QI1", "QI2", "QI3", "QI4" and "QI7".
- ◆ that had the service interval extension switched off
- ◆ where LongLife engine oil was not used

Have fixed service.

The fixed service intervals apply to all maintenance, which includes an oil change.

Vehicles with PR number "QG0"

The vehicles are "not" equipped at the factory with the components for flexible service. The maintenance has fixed service intervals.

Vehicles with PR number "QG2"

The PR number is only applicable through MY 2012.

On these vehicles, the flexible service was not activated at the factory. This means the vehicles have a fixed service interval display and the maintenance likewise has fixed intervals. Refer to [⇒ I2.1.4 Interval Display](#), page 14 . These vehicles have the following components:

- ◆ Fixed service interval display in instrument cluster
- ◆ Engine oil level sensor
- ◆ Brake pad wear indicator, if equipped

Vehicles with PR number "QG3"

The PR number is only applicable through MY 2012.

On these vehicles, the flexible service was not activated at the factory. This means the vehicles have a fixed service interval display and the maintenance service likewise has fixed service intervals. Refer to [⇒ I2.1.4 Interval Display](#), page 14 . These vehicles have the following components:

- ◆ Fixed service interval display in instrument cluster
- ◆ Brake pad wear indicator, if equipped



2.1.4 Service Interval Display

Introduction of the LongLife Maintenance Schedule. Refer to ➤ [page 14](#) .

Flexible service interval display (only vehicles with flexible service). Refer to ➤ [page 14](#) .

Fixed Service Interval Display (Only Vehicles with Fixed Service). Refer to ➤ [page 14](#) .

Service when due through MY 2013. Refer to ➤ [page 15](#) .

Service when due from MY 2014. Refer to ➤ [page 15](#) .

Advanced service warning through MY 2013. Refer to ➤ [page 16](#) .

Service advance warning from MY 2014. Refer to ➤ [page 17](#) .

Using the rocker switch on the windshield wiper lever or the buttons in the multifunction steering wheel to check for service messages through MY 2013. Refer to ➤ [page 18](#) .

Using the rocker switch on the windshield wiper lever or the buttons in the multifunction steering wheel to check for service messages from MY 2014. Refer to ➤ [page 19](#) .

Using the buttons in the instrument cluster to check for service messages through MY 2013. Refer to ➤ [page 19](#) .

Using the buttons in the instrument cluster to check for service messages from MY 2014. Refer to ➤ [page 20](#) .

Service Interval Display, Resetting and Coding. Refer to ➤ [14.53 interval Display, Resetting and Coding](#) , [page 267](#) .

Introduction of the LongLife Maintenance Schedule

Check with the importer if the maintenance interval extension is available in the respective market.

Flexible Service Interval Display (Only Vehicles with Flexible Service)

Calculating the maintenance intervals:

- ◆ The maintenance interval on vehicles with flexible service is calculated. Input data such as distance, fuel consumption, oil temperature and diesel particulate filter ash load are monitored by a control module.
- ◆ The result of the evaluation is a value for the wear of the oil due to thermal loading.
- ◆ The oil wear is the deciding factor concerning the distance that can still be driven until the next service.



Note

On a vehicle with flexible service, it is necessary to code the service interval display to "not flexible" if it was necessary to perform a maintenance according to the fixed service. Refer to ➤ [14.53 interval Display, Resetting and Coding](#) , [page 267](#) .

Fixed Service Interval Display (Only Vehicles with Fixed Service)

Calculating the maintenance intervals:

- ◆ The maintenance interval on vehicles with a fixed service is calculated in fixed service intervals. This means that the



specified distance or time values are determined by Volkswagen beforehand and are fixed.

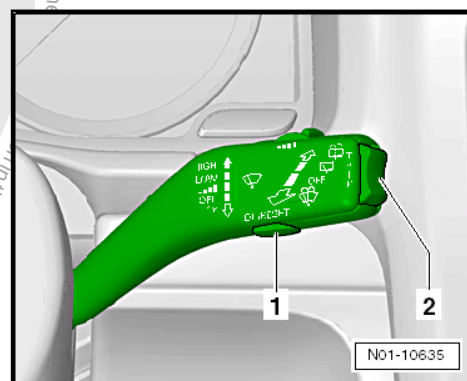
- ◆ Under ordinary operating conditions, this technically assures that the service will be performed when these intervals are reached.

Service when due through MY 2013.

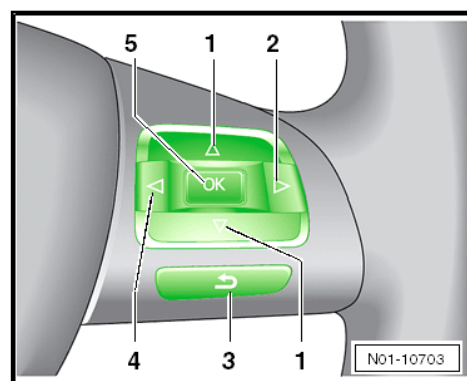
- ◆ If the vehicle does not have text display in the instrument cluster, then a gong will sound when the ignition is turned on to alert the driver that a service is due. The "wrench symbol" will also blink for a few seconds.
- ◆ If the vehicle has text display in the instrument cluster, the message will appear: "Service Now".

The service message will go out after a few seconds or when the engine is running.

- You can switch back to the standard display by pressing the "OK" button -1- for the multifunction Indicator in the wind-shield wiper lever.



- The "OK" button -5- in the multifunction steering wheel can also be pressed to switch back to the standard display.



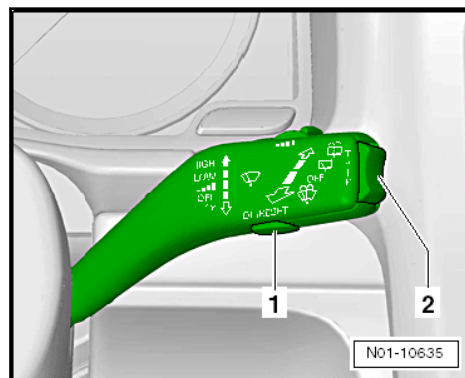
Service when due from MY 2014.

- ◆ If the vehicle does not have text display in the instrument cluster, then a gong will sound when the ignition is turned on to alert the driver that a service is due. The "wrench symbol" will also blink for a few seconds, and the number "1" for oil change service or "2" for the inspection service will show in the upper right in the instrument cluster display.
- ◆ If the vehicle has text display in the instrument cluster, the following message will appear: "oil change now" or "inspection service now".

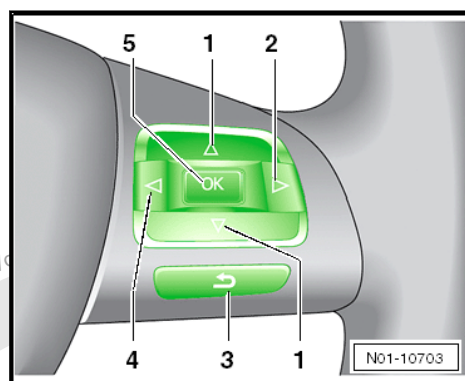
The service message will go out after a few seconds or when the engine is running.



- It is also possible to press the “OK button” -1- for the multi-function indicator in the windshield wiper lever.



- or press the “OK button” -5- in the multifunction steering wheel to switch back to the standard display.



Advanced service warning through MY 2013.

A “service advance warning” appears in the instrument cluster display when the ignition is switched on when a service is due soon.

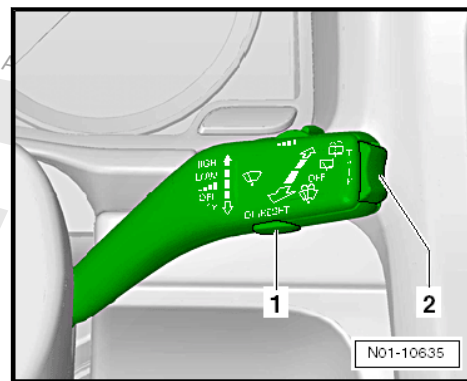
- ◆ If the vehicle does not have instrument cluster text display, then the “wrench symbol” appears with the number of “km” remaining until the next service is due.

The display changes after approximately 10 seconds. The “clock symbol” and the number of days remaining until the next service is due appears.

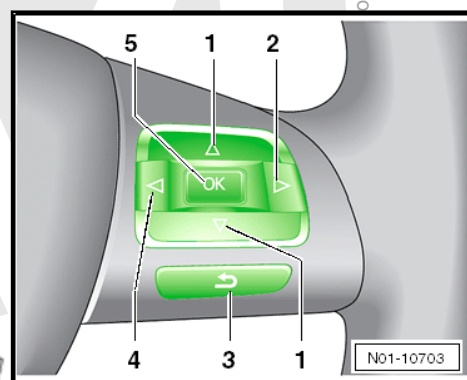
- ◆ If the vehicle has text display, “Service in --- km or --- days” appears.

The service message will go out after a few seconds or when the engine is running.

- You can switch back to the standard display by pressing the “OK” button for the multifunction Indicator in the windshield wiper lever -1-.



- The “OK” button -5- in the multifunction steering wheel can also be pressed to switch back to the standard display.



- ◆ The service advance warning appears for the first time 20 days before the service due date.
- ◆ The remaining distance is rounded to the 100 km (62.1 miles) and the remaining time to whole days.

Service advance warning from MY 2014.

A “service advance warning” appears in the instrument cluster display when the ignition is switched on when a service is due soon.

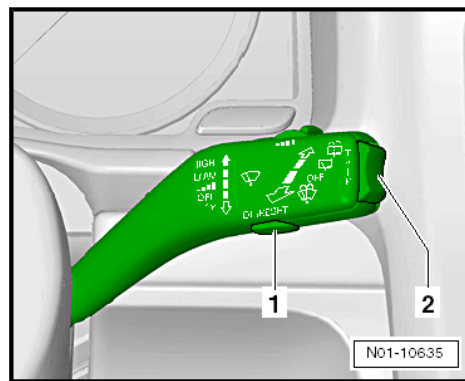
- ◆ If the vehicle does not have text display a “wrench symbol” along with the number of “km” remaining until the next service is due appear in the instrument cluster and the “clock symbol” and the number of days until the next service.
- ◆ The number “1” for oil change service or “2” for the inspection service will show in the upper right in the instrument cluster display.

If the advanced service warning for both services is displayed (“1” for oil change service or “2” for inspection service), if the vehicle does not have text display the instrument cluster the kilometer display and the display of days apply to the next service date.

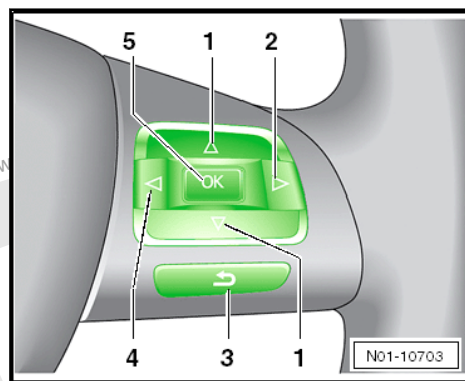
- ◆ If the vehicle has text display in the instrument cluster, the following message will appear: “Oil change in --- km or days” or “Inspection in -- km or days”.

The service message will go out after a few seconds or when the engine is running.

- It is also possible to press the “OK button” for the multifunction indicator in the windshield wiper lever -1-.



- or press the “OK button” -5- in the multifunction steering wheel to switch back to the standard display.



- ◆ The service advance warning begins to appear 20 days before the service due date.
- ◆ The remaining distance is rounded to the 100 km (62.1 miles) and the remaining time to whole days.

Using the rocker switch on the windshield wiper lever or the buttons in the multifunction steering wheel to check for service messages through MY 2013.



Note

- ◆ *The actual service message can be accessed only after the vehicle has been driven 500 km (310.7 miles) since the last service.*
- ◆ *Until then only dashes appear in the display.*

It is possible to check the most current service message at any time. The ignition must be switched on but the engine must be off.

- Select the “settings” menu using either the rocker switch on the windshield wiper lever or the buttons on the multifunction steering.
- Go the “Service” submenu, select “Info” and then press the “OK” button on the windshield wiper lever or in the multifunction steering wheel.
- ◆ If a service is overdue, a minus sign will appear in front of the kilometer or date on vehicles without an instrument cluster text display.
- ◆ The following appears when a service is overdue on vehicles with an instrument cluster text display: “Service since --- km or --- days.”



Using the rocker switch on the windshield wiper lever or the buttons in the multifunction steering wheel to check for service messages from MY 2014.



Note

- ◆ The actual service message can be accessed only after the vehicle has been driven 500 km (310.7 miles) since the last service.
- ◆ Until then only dashes appear in the display.

It is possible to check the most current service message at any time. The ignition must be switched on but the engine must be off.

- Select the “settings” menu using either the rocker switch on the windshield wiper lever or the buttons on the multifunction steering wheel.
- In the “Service” submenu, select “Info”.
- Press the “OK button” either in the windshield wiper lever or in the multifunction steering wheel.
- ◆ If the vehicle does not have text display a “wrench symbol”, and the number “1” for oil change service will show in the upper right in the instrument cluster display.
- Press the “OK button” either in the windshield wiper lever or in the multifunction steering wheel again.
- ◆ In the display a “wrench symbol”, and the number “2” for inspection service will show in the upper right in the instrument cluster display.

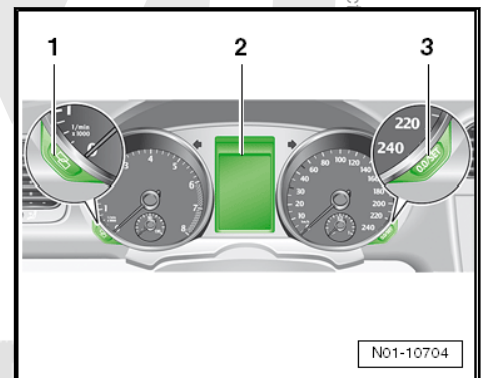
An overdue service is represented by a minus sign in front of the Kilometer- or day counter.

- ◆ If the vehicle has text display in the instrument cluster and a service is overdue, the following message will appear: “Oil change in --- km or days” or “Inspection in -- km or days”.

Using the buttons in the instrument cluster to check for service messages through MY 2013.

It is possible to check the most current service message at any time. The ignition must be switched on but the engine must be off.

- Press the button -3- twice to get to the operating “mode” menu.



- Press the button -1- four times.

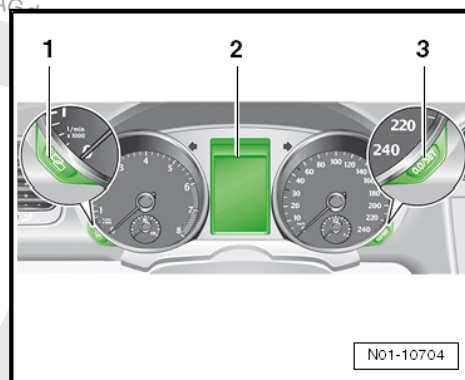
The service interval display starts to blink. The remaining time is displayed in days and km.



Using the buttons in the instrument cluster to check for service messages from MY 2014.

It is possible to check the most current service message at any time. The ignition must be switched on but the engine must be off.

- Press the button -1-, until the “wrench symbol” appears and in the upper right of the instrument cluster display -2- the number “1” appears for oil change service.



- Press the button -1- again.

The “wrench symbol” and the upper right of the instrument cluster display -2- the number “2” for the Inspection service are displayed.

An overdue service is represented by a minus sign in front of the Kilometer- or day counter.

2.2 Maintenance Tables for Market Designation A

⇒ [T2.2.1 tables](#)”, [page 20](#)

Country Assignment According to Market Designation. Refer to [⇒ A3.9 ssignment According to Market Designation](#)”, [page 63](#) .

Pre-Delivery Inspection. Refer to [⇒ I2.3.1 nspection](#)”, [page 36](#) .

The maintenance tables with the Volkswagen passenger vehicle maintenance specifications can be found in the following chapter.



Note

- ♦ *With combined distance and time measurements: whichever comes first.*
- ♦ *In addition to interval service, inspection service or interval service inspection, additional maintenance work must be performed depending on the operating conditions and vehicle equipment. Refer to [⇒ O3.10 perating Conditions](#)”, [page 65](#) .*
- ♦ *It is also possible that additional work, depending on what is listed in the maintenance schedule (or on the Your Next Service label), must be performed outside of the maintenance intervals.*

2.2.1 Maintenance Tables

Service Intervals. Refer to [⇒ page 21](#) .



Volkswagen Engine Oil Standards. Refer to ➤ [page 24](#) .

Filter Replacement Intervals. Refer to ➤ [page 25](#) .

Toothed Belt Replacement Intervals. Refer to ➤ [page 26](#) .

Spark Plug Replacement Intervals. Refer to ➤ [page 27](#) .

Additional Time or Distance-Dependent Additional Work. Refer to ➤ [page 28](#) .

◆ Rest of world market through 2007. Refer to ➤ [page 28](#) .

◆ Rest of world market from MY 2008. Refer to ➤ [page 31](#) .

Service Intervals



Caution

Only applies to diesel engines:

- *The diesel fuel in some countries may have a higher sulfur content.*
- *The high sulfur content increases cylinder wear and reduces the cleanliness of the pistons considerably.*
- ◆ *For this reason it is necessary to perform an oil change and to replace the fuel filter every 7,500 km (5,000 miles) in countries with elevated sulfur content in diesel fuel.*
- ◆ *Countries with Elevated Sulfur Content in Diesel Fuel. Refer to ➤ [w3.8 1th Elevated Sulfur Content in Diesel Fuel, Not for North America Market](#), page 62 .*

◆ Service intervals: Jetta MY 2005-2007, Golf Wagon MY 2007. Refer to ➤ [page 22](#) .

◆ Service intervals: Jetta MY 2008-2010, Golf Variant MY 2008-2009, Golf Wagon from MY 2010, Jetta from MY 2011. Refer to ➤ [page 22](#) .

◆ Service intervals: Jetta and Golf Wagon from MY 2013. Refer to ➤ [page 23](#) .

◆ Service intervals: Jetta from MY 2014. Refer to ➤ [page 24](#) .



Note

- ◆ *When driving extremely uneconomical or when using vehicle in extreme operating conditions (refer to ➤ [O3.10 perating Conditions](#), page 65) the shortest interval for an oil change service is "7,500 km (5,000 miles) or 1 year".*
- ◆ *Some markets may have different intervals. Check with the importer.*



Service intervals: Jetta MY 2005-2007, Golf Wagon MY 2007			
Gasoline and diesel engine			
from - through	Type of service engine code / PR number / comments	Service	Intervals
from introduction	Diesel engines with elevated sulfur content in fuel • Countries with Elevated Sulfur Content in Fuel. Refer to ➤ w3.8 ith Elevated Sulfur Content in Diesel Fuel, Not for North America Market , page 62.	Oil Change Service	every 7,500 km (5,000 miles) / 1 year
from introduction - through 2007	QG0/QG2/QG3 or QG1 vehicles coded for fixed intervals	Oil Change Service	Every 15,000 km (10,000 miles) / 1 year: whichever occurs first
		Interval Service	Every 30,000 km (20,000 miles) / 2 years whichever occurs first
	QG1 vehicles	Interval Service	flexible from 15,000 km (10,000 miles) to max. 30,000 km (20,000 miles)/2 years whichever occurs first
	QG0/QG2/QG1 Vehicles	Interval service inspection	Every 60,000 km (40,000 miles) / 4 years: whichever occurs first



Note

- ◆ When driving extremely uneconomical or when using vehicle in extreme operating conditions (refer to ➤ [O3.10 perating Conditions](#), page 65) the shortest interval for an oil change service is "7,500 km (5,000 miles) or 1 year".
- ◆ Some markets may have different intervals. Check with the importer.

Service intervals: Jetta MY 2008-2010, Golf Variant MY 2008-2009, Golf Wagon from MY 2010, Jetta from MY 2012			
Gasoline and diesel engine			
from - through	Type of service engine code / PR number / comments	Service	Intervals
from introduction	Diesel engines with elevated sulfur content in fuel • Countries with Elevated Sulfur Content in Fuel. Refer to ➤ w3.8 ith Elevated Sulfur Content in Diesel Fuel, Not for North America Market , page 62.	Oil Change Service	every 7,500 km (5,000 miles) / 1 year
From introduction through MY 2012	QG0/QG2/QG3 or QG1 vehicles coded for fixed intervals	Oil Change Service	After service interval display every 15,000 km (10,000 miles) / 1 year: whichever occurs first
		Interval Service	Every 30,000 km (20,000 miles) / 2 years whichever occurs first
	QG1 vehicles	Interval Service	After the flexible service interval display from 15,000 km (10,000 miles) / 1 year through maximum 30,000 km (20,000 miles) / 2 years



Service intervals: Jetta MY 2008-2010, Golf Variant MY 2008-2009, Golf Wagon from MY 2010, Jetta from MY 2012			
Gasoline and diesel engine			
from - through	Type of service engine code / PR number / comments	Service	Intervals
	QG0/QG2/QG1 Vehicles	Inspection Service	<ul style="list-style-type: none"> ◆ First interval after 60,000 km (40,000 miles) / 3 years ◆ Then every 60,000 km (40,000 miles) / 2 years



Note

With combined distance and time measurements: whichever comes first.

Service intervals: Jetta and Golf Wagon from MY 2013			
Gasoline and diesel engine			
from - through	Type of service engine code / PR number / comments	Service	Intervals
2013	QI1	Oil change service (fixed)	every 5,000 km (3,000 miles) / 1 year
	QI2	Oil change service (fixed)	every 7,500 km (5,000 miles) / 1 year
	QI3	Oil change service (fixed)	every 10,000 km (6,000 miles) / 1 year
	QI4	Oil change service (fixed)	every 15,000 km (10,000 miles) / 1 year
	QI7	Oil change service (fixed)	every 10,000 miles / 1 year
	QI1, QI2, QI3, QI4 and QI7	Interval service (fixed)	every 30,000 km (20,000 miles) / 2 years
	QI6	Interval service (flexible)	from 15,000 km (10,000 miles) / 1 year up to maximum 30,000 km (20,000 miles) / 2 years
	QI1, QI2, QI3, QI4, QI6 and QI7	Inspection Service	After 3 years/ maximum 60,000 km (40,000 miles), then every 2 years / 60,000 km (40,000 miles)



Note

With combined distance and time measurements: whichever comes first.



Service intervals: Jetta from MY 2014			
Gasoline and diesel engine			
from - through	Type of service engine code / PR number / comments	Service	Intervals
From 2013	QI1	Oil change service (fixed)	every 5,000 km (3,000 miles) / 1 year
	QI2	Oil change service (fixed)	every 7,500 km (5,000 miles) / 1 year
	QI3	Oil change service (fixed)	every 10,000 km (6,000 miles) / 1 year
	QI4	Oil change service (fixed)	every 15,000 km (10,000 miles) / 1 year
	QI6	Oil change service (flexible)	maximum 30,000 km (20,000 miles) / 2 years
	QI7	Oil change service (fixed)	every 10,000 miles / 1 year
	QI1, QI2, QI3, QI4, QI6 and QI7	Inspection	After 30,000 km (20,000 miles) / 2 years, then every 30,000 km (20,000 miles) / 1 year

Volkswagen Engine Oil Standards



Caution

Use only Volkswagen approved engine oils. Refer to ➤ ServiceNet, Technology, Inspection and Maintenance, Approved Engine Oils.

VW ENGINE OIL STANDARDS			
◆ GASOLINE ENGINES			
• "With flexible service"		• "With fixed service"	
Engine type	Engine oil standards	Engine type	Engine oil standards
4-Cylinder engine including FSI	504 00 (refer to ¹⁹⁾) alternatively 503 00 ²⁰⁾	4-Cylinder engine including FSI through MY 2007	501 01/502 00
		4-Cylinder engine including FSI from MY 2008	502 00
4-Cylinder engine TSI	504 00. Refer to ¹⁹⁾ .	4-Cylinder engine TSI	502 00
5-Cylinder engine SRE	---	5-Cylinder engine SRE	502 00
DIESEL ENGINES			
◆ without diesel particulate filter			
◆ and diesel engines with retrofitted diesel particulate filter			
• "With flexible service"		• "With fixed service"	
Engine type	Engine oil standards	Engine type	Engine oil standards
4-Cylinder TDI PD	507 001 ¹⁹⁾ alternatively 506 01 ²¹⁾	4-Cylinder TDI PD	505 01



VW ENGINE OIL STANDARDS			
♦ DIESEL ENGINES with factory-installed diesel particulate filter			
• "With flexible service"		• "With fixed service"	
Engine type	Engine oil standards	Engine type	Engine oil standards
4-Cylinder TDI PD	507 00. Refer to ¹⁹⁾ .	4-Cylinder TDI PD	507 00. Refer to ¹⁹⁾ .
4-Cylinder TDI CR	507 00. Refer to ¹⁹⁾ .	4-Cylinder TDI CR	507 00. Refer to ¹⁹⁾ .

19) Combination product: 504 00/507 00

20) Combination product: 503 00/506 00

21) Combination product: 503 00/506 00/506 01



Note

Vehicles with a retrofitted diesel particulate filter are assigned in the table under diesel engines without diesel particulate filter. To see if a vehicle has diesel particulate filter from the factory, look for PR number 7GG, 7MB, 7MG or 7GA on the vehicle data label.

Filter Replacement Intervals

FILTER REPLACEMENT INTERVALS	
♦ ENGINE OIL FILTER. Refer to ²²⁾ ²³⁾ and Refer to ⇒ O4.36 il, Draining or Extracting, Replacing Oil Filter and Filling Engine Oil , page 190 .	
TYPE OF SERVICE	CHANGE INTERVALS
Vehicles with flexible service	according to flexible service interval display
all other vehicles through MY 2012	Every 15,000 km (10,000 miles) or 1 year
all other vehicles from MY 2013	according to service interval display for oil change service / interval service

22) Replace the oil filter at every oil change.

23) Only applies to diesel engines: there is an elevated sulfur content in diesel fuel in some countries. The high sulfur content increases cylinder wear and reduces the cleanliness of the pistons considerably. For this reason it is necessary to perform an oil change and to replace the fuel filter every 7,500 km (5,000 miles) in countries with elevated sulfur content in diesel fuel. Check with the importer to see which countries have a higher sulfur content in diesel fuel.

♦ AIR FILTER. Refer to ⇒ F4.30 ilter, Cleaning Housing and Replacing Filter Element , page 153 .	
ENGINE TYPE	CHANGE INTERVALS
all engine types	EVERY 6 years ♦ Driving less than 90,000 km (60,000 miles) in 6 years
	EVERY 90,000 km (60,000 miles) ♦ Driving more than 90,000 km (60,000 miles) in 6 years Whichever occurs first

♦ DIESEL FUEL FILTER. Refer to ⇒ F4.15 uel Filter, Replacing , page 122 .	
ENGINE TYPE	DIESEL STANDARDS / CHANGE INTERVALS



◆ **DIESEL FUEL FILTER.** Refer to ➤ **F4.15 uel Filter, Replacing", page 122 .**

all diesel engines	Diesel conforming to EN 590	Diesel not conforming to EN 590	Diesel with higher sulfur content	RME bio diesel for vehicles through 05/2006
	Every 90,000 km (60,000 miles)	Every 30,000 km (20,000 miles)	Every 7,500 km (5,000 miles)	Every 30,000 km (20,000 miles)
Draining water procedure does not apply.				

◆ **DUST AND POLLEN FILTER.** Refer to ➤ **a4.57 nd Pollen Filter, Cleaning Housing and Replacing Filter", page 283 .**

ENGINE TYPE	CHANGE INTERVALS
all engine types	EVERY 60,000 km (40,000 miles)
	◆ Driving less than 60,000 km (40,000 miles) in 2 years
	EVERY 2 years
	◆ Driving more than 60,000 km (40,000 miles) in 2 years
	Whichever occurs first

◆ **OIL FILTER FOR DSG TRANSMISSION.** Refer to ➤ **D4.13 SG Transmission 02E, Changing Transmission Fluid and Filter", page 118 .**

TRANSMISSION TYPE	CHANGE INTERVALS
6-speed DSG, 02E	Every 60,000 km (40,000 miles)

Toothed Belt Replacement Intervals

- Refer to the engine overview to determine if the engine has a toothed belt or a timing chain Refer to ➤ **O1 verview", page 1 .**



Note

The camshaft drive with timing chain is maintenance-free.

Toothed belt replacement interval, tensioner replacement interval

DIESEL ENGINES Refer to ➤ **B4.63 elt and Toothed Belt Tensioning Roller, Replacing (TDI Engines)", page 291**

ENGINE TYPE	Engine code	Time period	Toothed belt replacement interval	Tensioner replacement interval
All TDI CR	CBDA, CBDB CBEA, CJAA CAYB, CAYC CFFB, CFHB CFHC, CLCA	from introduction	Every 120,000 km (80,000 miles) toothed belt <ul style="list-style-type: none"> Only applies to diesel vehicles that will be driven in countries with high air dust. Refer to ➤ w3.12 ith High Air Dust Levels", page 65 . 	Every 120,000 km (80,000 miles) tensioning roller <ul style="list-style-type: none"> Only applies to diesel vehicles that will be driven in countries with high air dust. Refer to ➤ w3.12 ith High Air Dust Levels", page 65 .
TDI-PD	AZV, BKC, BKD, BLS, BMN, BMM, BRM, BXE	From introduction through MY 2006	Every 120,000 km (80,000 miles)	Through MY 2006 Every 240,000 km (150,000 miles)



Toothed belt replacement interval, tensioner replacement interval				
DIESEL ENGINES Refer to ➤ B4.63 elt and Toothed Belt Tensioning Roller, Replacing (TDI Engines) , page 291				
TDI-PD	AZV, BKC, BKD, BLS, BMN, BMM, BRM, BXE	From MY 2007	Every 150,000 km (93,205.5 miles)	From MY 2007 every 300,000 km (180,000 miles)
TDI CR	CAYC, CFFB, CFHC, CJAA, CLCA, CFHB, CLCB, CEGA, CBDA, CBDB, CBEA, CAYB	through MY 2009	Every 180,000 km (100,000 miles)	Every 360,000 km (223,693.2 miles)
TDI CR	CAYC, CFFB, CFHC, CJAA, CLCA, CFHB, CLCB, CEGA, CBDA, CBDB, CBEA, CAYB	from MY 2010	Every 210,000 km (130,000 miles) • Pay attention to the replacement interval variance. Refer to ➤ page 26 .	Every 210,000 km (130,000 miles) • Pay attention to the replacement interval variance. Refer to ➤ page 26 .

Toothed Belt Replacement Intervals			
GASOLINE ENGINES. Refer to ➤ D4.65 rive Toothed Belt, Replacing, 2.0L FSI and TFSI Engine , page 292 .			
Engine type	Engine code	Time period	Toothed belt replacement interval
1.4L	BUD, CGGA	from introduction	No specified change interval, toothed belt drive with check interval, see: ♦ "Additional Time or Distance-Dependent Additional Work through MY 2007". Refer to ➤ page 28 . ♦ "Additional Time or Distance-Dependent Additional Work from MY 2008". Refer to ➤ page 31 .
1.6L	BSE, BSF, CCSA, CMXA	from introduction	
1.4L TSI Hybrid	CNLA and CRJA	from introduction	No specified replacement interval, Toothed belt drive with check interval, see "Additional Time or Mileage-Dependent Service Work from MY 2008". Refer to ➤ page 31 .
2.0L SRE, 85 kW	CBPA	from introduction	
2.0L FSI, 110 kW 2.0L TFSI, 147 kW	AXX, BLR, BLY, BWA, BPY, BVY, BVZ	from introduction	Every 180,000 km (100,000 miles)

Spark Plug Replacement Intervals

- Spark plug identification and tightening specification. Refer to ➤ Rep. Gr. 28; Ignition System; Test Data, Spark Plugs.
- Engine→Selecting Engine,→Rep.-Gr.28→Ignition System,→Test Data,→Spark Plugs



Note

For technical reasons it is possible the links do not go to the correct chapter. If that is the case, please look up the procedure manually in the corresponding infomedia.



Spark Plug Replacement Intervals		
Engine type	Engine code	Replacement intervals
1.4L FSI	CNWA,	EVERY 20,000 km (15,000 miles) ♦ Driving less than 20,000 km (15,000 miles) in 2 years
		EVERY 2 years ♦ Driving more than 20,000 km (15,000 miles) in 2 years
1.2L TSI 1.4L SRE, FSI, TSI 1.4L TSI-Hybrid 1.6L SRE, FSI 2.0L FSI, 110 kW 2.5L SRE 125 kW 2.0L SRE 85 kW	CBZB BLG, BMY, BUD, CAVD, CAXA, CTHA, CTHD, CNLA, CRJA BLF, BSE, BSF, CCSA, CFNA, CLRA BLR, BLY, BVY, BVZ, CBTA, CBUA, CCCA CBPA, CMSB,	EVERY 60,000 km (40,000 miles) ♦ Driving less than 60,000 km (40,000 miles) in 4 years
		EVERY 4 years ♦ Driving more than 60,000 km (40,000 miles) in 4 years
2.0L TSI 2.0L TFSI, 147 kW	AXX, BPY, BWA, CAWB, CBFA, CCTA	EVERY 90,000 km (60,000 miles) ♦ Driving more than 90,000 km (60,000 miles) in 6 years
		EVERY 6 years ♦ Driving less than 90,000 km (60,000 miles) in 6 years
1.8L TSI 2.0L TSI	CPKA, CPRA CPLA, and CPPA	EVERY 60,000 km (40,000 miles) • Driving more than 60,000 km (40,000 miles) in 4 years
		EVERY 4 years • Driving less than 60,000 km (40,000 miles) in 4 years

Additional Time or Distance-Dependent Additional Work through MY 2007

In addition to interval service, or interval service inspection, additional maintenance work must be performed depending on the operating conditions and vehicle equipment. Refer to ➤ [O3.10 Operating Conditions](#), page 65.

It is also possible that additional work, depending on what is listed in the maintenance schedule (or on the Your Next Service label), must be performed outside of the maintenance intervals.

Every 30,000 km (20,000 miles)

Additional work	Page
<ul style="list-style-type: none"> – Diesel fuel filter “REPLACING” - operation with diesel fuel that: <ul style="list-style-type: none"> • Does »NOT« conform to EN 590 • For RME operation (bio diesel) conforming to “EN 14214” • For vehicles through 05/2006 	<p>⇒ F4.15 Fuel Filter, Replacing, page 122</p>



Every 60,000 km (40,000 miles)

Additional work	Page
<ul style="list-style-type: none"> Automatic Transmission, Changing ATF only applies to the 09G transmission in China, USA and countries with hot climates 	⇒ T4.4 ransmission 09G, Changing ATF", page 78
<ul style="list-style-type: none"> 6-Gear DSG Transmission 02E, Changing Fluid and Filter 	⇒ D4.13 SG Transmission 02E, Changing Transmission Fluid and Filter", page 118
<ul style="list-style-type: none"> Replace the dust and pollen filter (passenger compartment filter) ◆ Vehicles with more than 60,000 km (40,000 miles) driven in 2 years 	⇒ a4.57 nd Pollen Filter, Cleaning Housing and Replacing Filter", page 283
<ul style="list-style-type: none"> Spark Plugs, Replacing ◆ vehicles with more than 60,000 km (40,000 miles) driven in 4 years ◆ Does not apply to 2.0L TFSI 147 kW engine ◆ Spark plug identification. Refer to the "Engine" repair manual ⇒ Rep. Gr. 28"Test Data, Spark Plugs". 	⇒ P4.68 lugs, Replacing", page 297

Every 90,000 km (60,000 miles)

Additional work	Page
<ul style="list-style-type: none"> Replace air filter insert and clean housing ◆ Vehicles driven more than 90,000 km (60,000 miles) in 6 years 	⇒ F4.30 ilter, Cleaning Housing and Replacing Filter Element", page 153
<ul style="list-style-type: none"> Diesel fuel filter: "REPLACING" - operation with diesel fuel that: Conforms to EN 590 	⇒ F4.15 uel Filter, Replacing", page 122
<ul style="list-style-type: none"> Spark Plugs, Replacing ◆ Vehicles driven more than 90,000 km (60,000 miles) in 6 years ◆ Only 2.0L TSI and 2.0L TFSI 147 kW engine ◆ Spark plug identification. Refer to the "Engine" repair manual ⇒ Rep. Gr. 28"Test Data, Spark Plugs". 	⇒ P4.68 lugs, Replacing", page 297

At 90,000 km (60,000 miles), then every 30,000 km (20,000 miles)

Additional work	Page
<ul style="list-style-type: none"> Camshaft Drive Toothed Belt, Checking ◆ 4-cylinder gasoline engines (1.4L and 1.6L) 	⇒ D4.66 rive Toothed Belt, Checking, 4-Cylinder Gasoline Engines without Replacement Interval", page 292



Every 120,000 km (80,000 miles)

Additional work	Page
<ul style="list-style-type: none">– Camshaft Drive Toothed Belt, Replacing• Applies to 4-cylinder engines TDI PD through MY 2006• A change from the current interval is not necessary	⇒ B4.63 elt and Toothed Belt Tensioning Roller, Replacing (TDI Engines)", page 291

Every 150,000 km (93,205.5 miles)

Additional work	Page
<ul style="list-style-type: none">– Camshaft Drive Toothed Belt, Replacing◆ Only 4-cylinder TDI PD engines, from MY 2007	⇒ B4.63 elt and Toothed Belt Tensioning Roller, Replacing (TDI Engines)", page 291

At 150,000 km (93,205.5 miles), then every 30,000 km (20,000 miles)

<ul style="list-style-type: none">– Diesel Particulate Filter, Checking• Applies only to vehicles equipped with a factory installed diesel particulate filter• Vehicles with diesel particulate filter. Refer to ⇒ page 7.	⇒ P4.16 articulate Filter, Checking", page 128
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Every 180,000 km (100,000 miles)

Additional work	Page
<ul style="list-style-type: none">– Camshaft Drive Toothed Belt, Replacing◆ Only 2.0L FSI 11kW and 2.0L TFSI 147 kW	⇒ D4.65 rive Toothed Belt, Replacing, 2.0L FSI and TFSI Engine", page 292

Every 240,000 km (150,000 miles)

Additional work	Page
<ul style="list-style-type: none">– Camshaft Drive Toothed Belt Tensioning Roller: Replacing• Applies to 4-cylinder engines TDI PD through MY 2006• A change from the current interval is not necessary	⇒ B4.63 elt and Toothed Belt Tensioning Roller, Replacing (TDI Engines)", page 291

Every 300,000 km (180,000 miles)

Additional work	Page
<ul style="list-style-type: none">– Toothed Belt Tensioning Roller, Replacing◆ Only 4-cylinder TDI PD engines, from MY 2007◆ A change from the current interval is not necessary	⇒ B4.63 elt and Toothed Belt Tensioning Roller, Replacing (TDI Engines)", page 291



Every 2 years

Additional work	Page
<ul style="list-style-type: none"> – Brake and Clutch System, Changing Brake Fluid • Additional work is charged separately! – If necessary perform during the interval service or interval service inspection. 	⇒ a4.10 nd Clutch System, Changing Brake Fluid”, page 110
<ul style="list-style-type: none"> – Replace the dust and pollen filter (passenger compartment filter) ◆ Vehicles with less than 60,000 km (40,000 miles) driven in 2 years 	⇒ a4.57 nd Pollen Filter, Cleaning Housing and Replacing Filter”, page 283

Every 3 years

Additional work	Page
<ul style="list-style-type: none"> – BorgWarner Clutch, Changing Oil • Only applies to 4-MOTION 	⇒ C4.22 lutch, Changing Oil”, page 133

Every 4 years

Additional work	Page
<ul style="list-style-type: none"> – Spark Plugs, Replacing ◆ Vehicles with less than 60,000 km (40,000 miles) driven in 4 years ◆ Does not apply to 2.0L TFSI 147 kW engine ◆ Spark plug identification. Refer to the “Engine” repair manual ⇒ Rep. Gr. 28“Test Data, Spark Plugs”. 	⇒ P4.68 lugs, Replacing”, page 297
<ul style="list-style-type: none"> – Tire inflation bottle from the tire mobility kit, replacing (if equipped) - pay attention to the expiration date. ◆ if equipped 	⇒ M4.38 obility Kit, Checking”, page 219

Every 6 years

Additional work	Page
<ul style="list-style-type: none"> – Air Filter, Cleaning Housing and Replacing Filter Element ◆ For vehicles driven less than 90,000 km (60,000 miles) within 6 years 	⇒ F4.30 ilter, Cleaning Housing and Replacing Filter Element”, page 153
<ul style="list-style-type: none"> – Spark Plugs, Replacing ◆ Vehicles driven less than 90,000 km (60,000 miles) in 6 years ◆ Only 2.0L TFSI 147 kW engine ◆ Spark plug identification. Refer to the “Engine” repair manual ⇒ Rep. Gr. 28“Test Data, Spark Plugs”. 	⇒ P4.68 lugs, Replacing”, page 297

Additional Time or Distance-Dependent Additional Work from MY 2008

In addition to interval service, or interval service inspection, additional maintenance work must be performed depending on the operating conditions and vehicle equipment. Refer to ⇒ [O3.10 perating Conditions”, page 65](#) .



It is also possible that additional work, depending on what is listed in the maintenance schedule (or on the Your Next Service label), must be performed outside of the maintenance intervals.

Every 7,500 km (5,000 miles)

Additional work	Page
<ul style="list-style-type: none"> – Diesel Fuel Filter, Replacing • for diesel engines with elevated sulfur content in fuel. 	⇒ F4.15 uel Filter, Replacing , page 122

Every 30,000 km (20,000 miles)

Additional work	Page
<ul style="list-style-type: none"> – Diesel Fuel Filter, Replacing • Applies to operation with diesel fuel that does »NOT« conform to EN 590 	⇒ F4.15 uel Filter, Replacing , page 122

Every 60,000 km (40,000 miles)

Additional work	Page
<ul style="list-style-type: none"> – Dual-Clutch Transmission (DSG) 02E, Replacing Transmission Fluid and Filter 	⇒ D4.13 SG Transmission 02E, Changing Transmission Fluid and Filter , page 118
<ul style="list-style-type: none"> – Replace the dust and pollen filter (passenger compartment filter) • applies to vehicles with more than 60,000 km (40,000 miles) driven in 2 years 	⇒ a4.57 nd Pollen Filter, Cleaning Housing and Replacing Filter , page 283
<ul style="list-style-type: none"> – Automatic Transmission, Changing ATF • only applies to the 09G transmission in China, USA and countries with hot climates 	⇒ T4.4 ransmission 09G, Changing ATF , page 78
<ul style="list-style-type: none"> – Panorama Sliding Sunroof: Checking Function, Clean And Lubricate Guide Rails With Special Lubricant, Clean Wind Deflector 	⇒ S4.39 liding Sunroof: Checking Function, Clean And Lubricate Guide Rails With Special Lubricant, Clean Wind Deflector , page 220
<ul style="list-style-type: none"> – Spark Plugs, Replacing • vehicles with more than 60,000 km (40,000 miles) driven in 4 years ◆ Only applies to engines with 1.4L including hybrid and 1.6L ◆ Only applies to 2.0L FSI 110 kW; 2.0L SRE 85 kW and 2.5L SRE 125 kW engine ◆ Spark plug identification. Refer to the "Engine" repair manual ⇒ Rep. Gr. 28 "Test Data, Spark Plugs". 	⇒ P4.68 lugs, Replacing , page 297
<ul style="list-style-type: none"> – Extended Inspection Sequence • After 60,000 km (40,000 miles) / 3 years, then every 60,000 km (40,000 miles) / 2 years • Only applicable in connection with the inspection. 	→ Maintenance tables



Every 90,000 km (60,000 miles)

Additional work	Page
<ul style="list-style-type: none"> – Replace air filter insert and clean housing. • Vehicles driven more than 90,000 km (60,000 miles) in 6 years 	⇒ F4.30 ilter, Clean- ing Housing and Replacing Filter Ele- ment”, page 153
<ul style="list-style-type: none"> – Diesel Fuel Filter, Replacing • Applies to operation with diesel fuel that conforms to EN 590 	⇒ F4.15 uel Filter, Replacing”, page 122
<ul style="list-style-type: none"> – Spark Plugs, Replacing • Vehicles driven more than 90,000 km (60,000 miles) in 6 years • Only applies to 2.0L TFSI 147 kW engines • Only applies to 2.0L TSI 147 kW engines ♦ Spark plug identification. Refer to the “Engine” repair manual ⇒ Rep. Gr. 28“Test Data, Spark Plugs”. 	⇒ P4.68 lugs, Re- placing”, page 297

At 90,000 km (60,000 miles), then every 30,000 km (20,000 miles)

Additional work	Page
<ul style="list-style-type: none"> – Camshaft Drive Toothed Belt, Checking • Applies only to engines without a specified change interval 	⇒ D4.66 rive Tooth- ed Belt, Checking, 4-Cylinder Gasoline Engines without Re- placement Interval”, page 292

Every 150,000 km (90,000 miles)

Additional work	Page
<ul style="list-style-type: none"> – Camshaft Drive Toothed Belt, Replacing • Only 4-cylinder TDI PD Engines ♦ Generally, it is not necessary to replace the belt before reaching the next replace- ment interval. In particular, cracks on the back side do not affect service life 	⇒ B4.63 elt and Toothed Belt Ten- sioning Roller, Re- placing (TDI En- gines)”, page 291

At 150,000 km (90,000 miles), then every 30,000 km (20,000 miles)

Additional work	Page
<ul style="list-style-type: none"> – Diesel Particulate Filter: Checking, 2008 through 2009 Vehicles • Applies only to vehicles equipped with a factory installed diesel particulate filter • Vehicles with diesel particulate filter. Refer to ⇒ page 7 . 	⇒ P4.16 articulate Filter, Checking”, page 128



Every 180,000 km (100,000 miles)

Additional work	Page
<ul style="list-style-type: none">– Camshaft Drive Toothed Belt, Replacing• Applies to 2.0L FSI and TFSI engines• A change from the current interval is not necessary	⇒ D4.65 rive Toothed Belt, Replacing, 2.0L FSI and TFSI Engine", page 292

At 180,000 km (100,000 miles), then every 30,000 km (20,000 miles)

Additional work	Page
<ul style="list-style-type: none">– Diesel Particulate Filter: Checking 2010 through 2013 Vehicles• Applies only to vehicles equipped with a factory installed diesel particulate filter• Vehicles with diesel particulate filter. Refer to ⇒ page 7.	⇒ P4.16 articulate Filter, Checking", page 128

At 210,000 km (130,000 miles), then every 30,000 km (20,000 miles)

Additional work	Page
<ul style="list-style-type: none">– Diesel Particulate Filter: Checking Vehicles from MY 2014• Applies only to vehicles equipped with a factory installed diesel particulate filter• Vehicles with diesel particulate filter. Refer to ⇒ page 7.	⇒ P4.16 articulate Filter, Checking", page 128

At 240,000 km (150,000 miles), then every 30,000 km (20,000 miles)

Additional work	Page
<ul style="list-style-type: none">– Camshaft Drive Toothed Belt, Checking• Applies to 1.4L TSI hybrid• Applies only to engines without a specified change interval	⇒ D4.66 rive Toothed Belt, Checking, 4-Cylinder Gasoline Engines without Replacement Interval", page 292
<ul style="list-style-type: none">– Coolant Pump Toothed Belt, Checking• Applies to 1.4L TSI hybrid• Applies only to engines without a specified change interval	⇒ P4.67 ump Toothed Belt, Checking", page 294

Every 300,000 km (180,000 miles)

Additional work	Page
<ul style="list-style-type: none">– Camshaft Drive Toothed Belt Tensioning Roller: Replacing• Applies to 4-cylinder TDI PD engine from MY 2007• A change from the current interval is not necessary	⇒ B4.63 elt and Toothed Belt Tensioning Roller, Replacing (TDI Engines)", page 291



Every 2 years

Additional work	Page
<ul style="list-style-type: none"> – Replace the dust and pollen filter (passenger compartment filter) • Vehicles with less than 60,000 km (40,000 miles) driven in 2 years 	<p>⇒ a4.57 nd Pollen Filter, Cleaning Housing and Replacing Filter, page 283</p>

Every 3 years

Additional work	Page
<ul style="list-style-type: none"> – BorgWarner Clutch, Changing Oil • Only applies to 4-MOTION 	<p>⇒ C4.22 lutch, Changing Oil, page 133</p>

3 years after initial registration and then every 2 years.

Additional work	Page
<ul style="list-style-type: none"> – Brake and Clutch System, Changing Brake Fluid 	<p>⇒ a4.10 nd Clutch System, Changing Brake Fluid, page 110</p>
<ul style="list-style-type: none"> – Emissions Test, Performing • only applies to Germany 	<p>⇒ T5 est, page 332</p>

Every 4 years

Additional work	Page
<ul style="list-style-type: none"> – Spark Plugs, Replacing • Vehicles with less than 60,000 km (40,000 miles) driven in 4 years • Only applies to engines with 1.4L including hybrid and 1.6L • Only applies to 2.0L FSI 110 kW; 2.0L SRE 85 kW and 2.5L SRE 125 kW engine ◆ Spark plug identification. Refer to the "Engine" repair manual ⇒ Rep. Gr. 28 "Test Data, Spark Plugs". 	<p>⇒ P4.68 lugs, Replacing, page 297</p>
<ul style="list-style-type: none"> – Tire Mobility Kit: Tire Sealant Replacing through 2012 • if equipped 	<p>⇒ M4.38 obility Kit, Checking, page 219</p>

Every 6 years

Additional work	Page
<ul style="list-style-type: none"> – Tire Pressure Monitoring Sensor: Changing through 2012 • if equipped 	<p>⇒ P4.45 ressure Monitoring Sensor, Replacing, page 239</p>
<ul style="list-style-type: none"> – Air Filter, Cleaning Housing and Replacing Filter Element • For vehicles driven less than 90,000 km (60,000 miles) within 6 years 	<p>⇒ F4.30 lter, Cleaning Housing and Replacing Filter Element, page 153</p>



Additional work	Page
<ul style="list-style-type: none"> – Spark Plugs, Replacing • Vehicles driven less than 90,000 km (60,000 miles) in 6 years • Only applies to 2.0L TFSI 147 kW engines • Only applies to 2.0L TSI 147 kW engines ◆ Spark plug identification. Refer to the “Engine” repair manual ⇒ Rep. Gr. 28 “Test Data, Spark Plugs”. 	⇒ P4.68 lugs, Replacing”, page 297

2.3 Maintenance Tables for Market Designation B and C, Not for North America Market

⇒ I2.3.1 nspection”, page 36

⇒ 2.3.2 , page 37

⇒ W2.3.3 ork Dependent on Time and Mileage, through MY 2013”, page 41

⇒ W2.3.4 ork Dependent on Time and Mileage, from MY 2014”, page 42

Because there are more individual maintenance specifications they are now listed divided according to the market area in the time and distance-dependent intervals additional work.

Country Assignment According to Market Designation. Refer to ⇒ A3.9 ssignment According to Market Designation”, page 63 .

Engine Oil Capacities and Specifications. Refer to ⇒ O4.37 il, Capacities and Specifications”, page 217 .

2.3.1 Pre-Delivery Inspection

Work to be completed:
– Battery, Checking Battery Terminal Clamps for Secure Fit
– Battery Transport Mode, Deactivating
– Service Interval Display, Resetting
– Battery Charge, Checking
– DTC Memory, Reading Out for All Systems
– Radio / Radio/Navigation System: Storing Local Radio Stations to Radio Station Buttons
– Hour and Date, Adjusting
– All Switches, Electrical Equipment, Sockets, Displays and Other Controls, Checking Function
– Front Passenger Airbag, Checking Key Switch and On/Off Function Control
– Power Window Regulator, Performing Initialization (Activation)
– Vehicle Interior, Checking for Cleanliness.
– Seat Covers and Carpet Protective Film, Removing
– All Equipment Delivered with Vehicle, Installing (if applicable)
– Two Clamps, Installing According to Installation Instructions
– Edge Protection (Plastic Film) on Doors, Removing
– Vehicle Exterior, Checking for Cleanliness.
– Tire Pressure, Checking.
– Wheel Bolts, Tightening to Specified Tightening Specification
– Windshield Wiper Protectors, Removing
– Tire Pressure Monitoring System, Calibrating to Tire Pressure Adjustment



Work to be completed:
– Vehicle for Leaks and Damage, Visually Inspecting from Above and Below
– Brake System, Visually Inspecting for Leaks and Damage
– Transportation Safeguard, Removing if Equipped
– Vehicle Underbody, Visually Inspecting for Damage
Windshield Wiper/Washer System and Headlamp Washer System: Check Function and Adjustment
Engine Oil Level, Checking; Pay Attention to Oil Specification when Filling
Coolant Level, Checking
Brake Fluid, Changing on Vehicles Older than Six Months
Brake Fluid Level, Checking it is at Maximum
Key, Checking Number, Function, and Cleanliness
– Maintenance Schedule, Entering Pre-Delivery Inspection
– Check the owner's literature for completeness and prepare for customer delivery.
– Road Test, Performing
– Warning Label, Checking Presence
– Charging Cable, Checking Presence and Condition
• Only applies to BEV and PHEV
– High-Voltage Battery, Charging
• Only applies to BEV and PHEV
– Special Rubber Care Set, Hanging on Interior Rearview Mirror
– Roof Pillar Storage Compartments, Rear Longitudinal Member Felt and Hydraulic Pump Sound Enclosure, Checking for Moisture
– Instrument Cluster, Adjusting Language (does not apply to German-speaking countries)
– On-Board Computer in Front Information Display Control Head, Resetting

2.3.2 Services



Note

- ◆ The service intervals can be combined depending on the time and distance (inspection with oil change).
- ◆ The expanded inspection service is performed as a joint work procedure with the inspection.
- ◆ The work to be completed can vary depending on the vehicle model and vehicle equipment.

Oil Change Service	Inspection	Expanded inspection service (only applies in combination with inspection)	Work to be completed
			Vehicle Interior



Oil Change Service	Inspection	Expanded inspection service (only applies in combination with inspection)	Work to be completed
		X	– Interior Lamps in Headliner, Luggage Compartment and Glove Compartment Lamps, Checking Function
	X		– Horn, Checking Function
	X		– Charging Cable, Checking Presence and Condition • Only applies to BEV
	X		– High-Voltage Battery Charge Level, Checking and Charging if Necessary • Only applies to BEV
		X	– Panorama Roof-Tilting Sunroof, Checking Function
Vehicle Exterior			
	X		– Headlamp Washer System, Checking Function
	X		– Front Lighting, Checking Function
	X		– Stationary Cornering Lamp, Checking Function
	X		– Automatic Headlamp Control, Checking Function
	X		– Rear Lamps, Checking Function
	X		– Windshield Wiper/Washer System, Checking and Adjusting Function, Spray Nozzle Adjustment and Checking for Damage
	X		– Wiper Blades, Bringing into Service Position, Checking for Damage and Checking Park Position
		X	Body Interior and Exterior, Visually Inspecting for Corrosion
		X	– Windshield, Visually Inspecting for Damage
	X		– High-Voltage Charging Socket in Radiator Grille, Visually Inspecting for Contamination and Damage • Only applies to PHEV
	X		– High-Voltage Charging Sockets in Radiator Grille and Fuel Filler Cap Visual Inspection Contamination and Damage, Performing • Only applies to BEV
X			– Reducing Agent (AdBlue®), Filling; Only at Customer Request • if equipped
X			– Plenum Chamber, Checking for Debris • Only applies to up! and e-up!
	X		– CSC Roof, Checking for Damage and Checking Function, Cleaning Wind Deflector and Seals and Applying Special Lubricant to Rubber Seals • Only applies to EOS



Oil Change Service	Inspection	Expanded inspection service (only applies in combination with inspection)	Work to be completed
		X	<ul style="list-style-type: none"> Sliding/Tilting Sunroof, Cleaning and Lubricating Guide Rails for Glass Panel and Sun Visor Only applies to EOS
		X	<ul style="list-style-type: none"> Hood Hook, Lubricating Does not apply to: Polo 6C1, up!, e-up!, Passat (NMS-US) A32, Golf 5G1, Golf Variant BA5, Golf Sportsvan AM1, e-Golf, Beetle, Jetta and Scirocco
		X	<ul style="list-style-type: none"> Door Arrester, Lubricating Only applies to Touran 1T, EOS, Golf Cabriolet, Jetta and Phaeton
		X	<ul style="list-style-type: none"> Convertible Top Locking Pieces, Cleaning and Lubricating Only applies to Golf convertible and beetle convertible
		X	<ul style="list-style-type: none"> Convertible Top, Performing Leak Test Only applies to Golf convertible and beetle convertible
X			<ul style="list-style-type: none"> Sliding Sunroof Seal, Lubricating Only applies to Phaeton
Vehicle from Below			
X			<ul style="list-style-type: none"> Engine Oil, Draining and Replacing Oil Filter
	X		<ul style="list-style-type: none"> Engine and Components in Engine Compartment (from Below), Visually Inspecting for Leaks and Damage
	X		<ul style="list-style-type: none"> Transmission, Final Drive and CV Boots, Checking for Leaks and Damage
X			<ul style="list-style-type: none"> Front and Rear Brake Pad Thickness and Brake Rotor Condition, Checking
		X	<ul style="list-style-type: none"> Ribbed Belt, Checking Condition
		X	<ul style="list-style-type: none"> Ball Joints, Axle Bearings, Coupling Rod and Stabilizer Bar Rubber Bushings, Visually Inspecting for Damage
		X	<ul style="list-style-type: none"> Tie Rod Ends, Checking Play, Attachment and Ball Joint Boots
		X	<ul style="list-style-type: none"> Brake System, Visually Inspecting for Leaks and Damage
		X	<ul style="list-style-type: none"> Exhaust System, Visually Inspecting for Leaks, Attachment and Damage
		X	<ul style="list-style-type: none"> Underbody, Visually Inspecting Underbody Protection, Underbody Trim Panels, Wire Routing and Plugs for Damage
		X	<ul style="list-style-type: none"> Front and Rear Coil Springs and Stop Buffers, Visually Inspecting for Damage
X			<ul style="list-style-type: none"> Warning Label, Checking Presence Only applies to high-voltage vehicles



Oil Change Service	Inspection	Expanded inspection service (only applies in combination with inspection)	Work to be completed
	X		<ul style="list-style-type: none"> Removable Trailer Hitch, Checking • if equipped
		X	<ul style="list-style-type: none"> Air Suspension, Checking for Leaks and Damage • Only applies to Touareg and Phaeton
		X	<ul style="list-style-type: none"> Sliding Sunroof, Checking Function, Cleaning Guide Rails, Lubricating with Special Lubricant
		X	<ul style="list-style-type: none"> Automatic Transmission, Checking ATF Level • Only applies to Phaeton
Tires			
	X		<ul style="list-style-type: none"> Tire Pressure, Checking.
	X		<ul style="list-style-type: none"> Tire Repair Kit, Checking for Damage and Use
	X		<ul style="list-style-type: none"> Tires, Checking Condition and Wear Pattern; Tread Depth, Entering
Engine Compartment			
X			<ul style="list-style-type: none"> Engine Oil, Filling
	X		<ul style="list-style-type: none"> Engine Oil Level, Checking
	X		<ul style="list-style-type: none"> Battery and Auxiliary Battery, Checking with Battery Tester if Necessary
	X		<ul style="list-style-type: none"> Engine and Engine Compartment Components, Visually Inspecting for Leaks and Damage from Above
	X		<ul style="list-style-type: none"> Brake Fluid Level, Checking Depending on Brake Pad Wear
	X		<ul style="list-style-type: none"> Cooling System, Checking Freeze Protection and Coolant Level
	X		<ul style="list-style-type: none"> Windshield Wiper/Washer System, Checking Freeze Protection and Filling Fluid
	X		<ul style="list-style-type: none"> Hybrid Components, Visually Inspecting for Damage of the High-Voltage Components and Wires • Only applies to HEV and PHEV
	X		<ul style="list-style-type: none"> High-Voltage Components and High-Voltage Cables, Visually Inspecting for Damage, Correct Wire Routing and Attachment • Only applies to BEV
		X	<ul style="list-style-type: none"> Power Steering, Checking Fluid Level • Only applies to Touareg and Phaeton
Final Procedures			
X			<ul style="list-style-type: none"> Service Interval Display, Resetting
	X		<ul style="list-style-type: none"> Headlamps, Checking and Adjusting if Necessary
	X		<ul style="list-style-type: none"> Tire Pressure Monitoring System, Calibrating to Tire Pressure Adjustment
	X		<ul style="list-style-type: none"> Road Test, Performing



Oil Change Service	Inspection	Expanded inspection service (only applies in combination with inspection)	Work to be completed
X			<ul style="list-style-type: none"> – High-Voltage Battery, Charging • Only applies to PHEV

2.3.3 Additional Work Dependent on Time and Mileage, through MY 2013



Note

- ◆ This chapter only describes the time- and mileage-dependent additional work through MY 2013 for India, China, Russia and the USA.
- ◆ Refer to chapter "Maintenance Tables for Market Designation A" for information about the markets not listed here. Refer to [⇒ T2.2 ables for Market Designation A", page 20](#).

North America through 2013

Work to be completed	Page
<ul style="list-style-type: none"> – Brake Fluid, Changing ◆ Additional work is charged separately. 	⇒ a4.10 nd Clutch System, Changing Brake Fluid", page 110
<ul style="list-style-type: none"> – Dust and Pollen Filter, Cleaning Housing and Replacing Filter ◆ All (30,000 km (20,000 miles)) 	⇒ a4.57 nd Pollen Filter, Cleaning Housing and Replacing Filter", page 283
<ul style="list-style-type: none"> – Camshaft Drive Toothed Belt Tensioning Roller: Replacing • Only 4-cylinder TDI PD engines, from MY 2007 ◆ All 190,000 miles / 300,000 km 	⇒ B4.63 elt and Tooth-ed Belt Tensioning Roller, Replacing (TDI Engines)", page 291
<ul style="list-style-type: none"> – Camshaft Drive Toothed Belt, Replacing • Only 4-cylinder TDI PD engines, from MY 2007 ◆ All (150,000 km (100,000 miles)) 	⇒ B4.63 elt and Tooth-ed Belt Tensioning Roller, Replacing (TDI Engines)", page 291
<ul style="list-style-type: none"> – Camshaft Drive Toothed Belt, Replacing • Only 4-cylinder TDI CR engines ◆ Through 2010: every (180,000 km (100,000 miles)) ◆ From 2011: every (210,000 km (130,000 miles)) 	⇒ B4.63 elt and Tooth-ed Belt Tensioning Roller, Replacing (TDI Engines)", page 291
<ul style="list-style-type: none"> – Camshaft Drive Toothed Belt, Replacing • Only 2.0L 147 kW engine ◆ Every (180,000 km (100,000 miles)) 	



Work to be completed	Page
<ul style="list-style-type: none"> – Sunroof Water Drains, Checking for Clearance and Cleaning ◆ Every (60,000 km (40,000 miles)) 	⇒ W4.52 ater Drains, Checking for Clearance and Cleaning”, page 264

2.3.4 Additional Work Dependent on Time and Mileage, from MY 2014

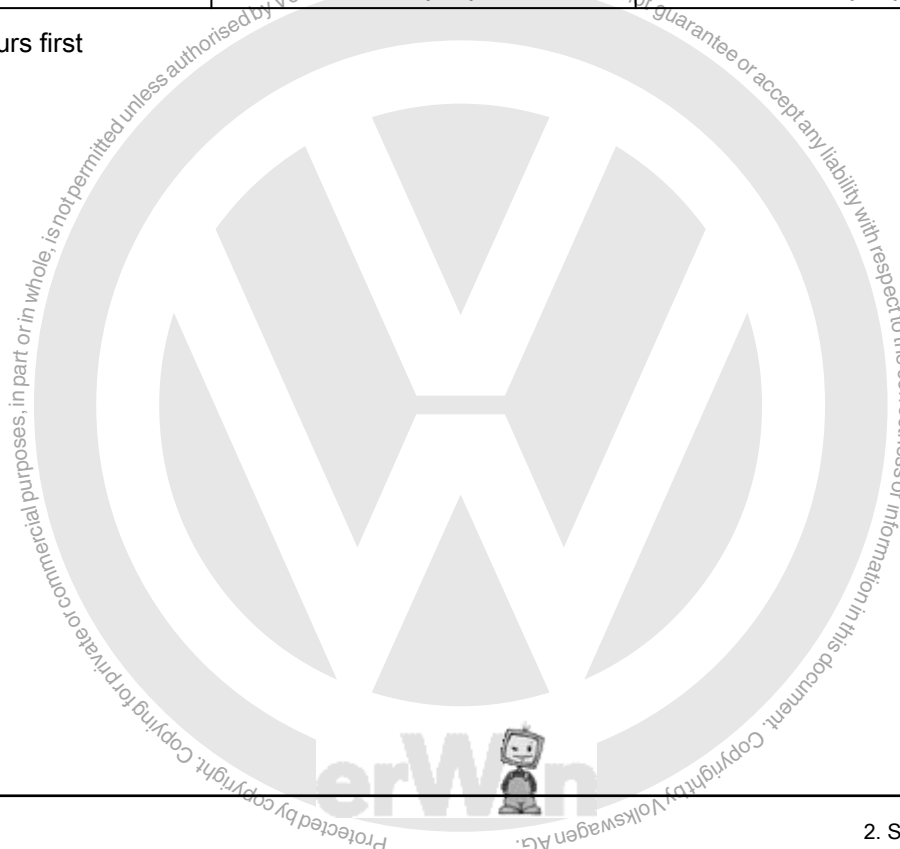
The intervals for the time and distance dependent additional work for the market designation A (refer to ⇒ [T2.2 ables for Market Designation A”, page 20](#)) can be found in the maintenance tables or in the ⇒ Maintenance Tables.

Work to be completed	Market designation B. Refer to ⇒ A3.9 ssignment According to Market Designation”, page 63 .	Market designation C. Refer to ⇒ A3.9 ssignment According to Market Designation”, page 63 .
Oil change service (fixed)	Q11 every 5,000 km (3,000 miles) or 1 year ¹⁾	
	Q12 every 7,500 km (5,000 miles) or 1 year ¹⁾	
	Q13 every 10,000 km (6,000 miles) or 1 year ¹⁾	
	Q14 every 15,000 km (10,000 miles) or 1 year ¹⁾	
Inspection	Every 15,000 km (10,000 miles) or 1 year ¹⁾	Every 10,000 km (6,000 miles) or 1 year ¹⁾
Extended Inspection Sequence • Only applicable in connection with the inspection.	Every 30,000 km (20,000 miles) or 2 years ¹⁾	Every 20,000 km (15,000 miles) or 2 years ¹⁾
– Dust and Pollen Filter (Passenger Compartment Filter), Replacing	Every 15,000 km (10,000 miles) or 1 year ¹⁾	Every 10,000 km (6,000 miles) or 1 year ¹⁾
– Air Filter Housing Stop Buffer, Replacing • Only applies to Scirocco R and Golf R Convertible	Every 30,000 km (20,000 miles) or 2 years ¹⁾	Every 30,000 km (20,000 miles) or 2 years ¹⁾
– Diesel Fuel Filter, Replacing	Every 30,000 km (20,000 miles)	Every 20,000 km (15,000 miles)
– Air Filter, Cleaning Housing and Replacing Filter Element	Every 30,000 km (20,000 miles) or 2 years ¹⁾	Every 20,000 km (15,000 miles) or 2 years ¹⁾
– Spark Plugs, Replacing	Every 30,000 km (20,000 miles) or 2 years ¹⁾	Every 20,000 km (15,000 miles) or 2 years ¹⁾
– Panorama Sliding Sunroof, Checking Function, Cleaning and Greasing Guide Rails, Cleaning Wind Deflector	Every 30,000 km (20,000 miles) or 2 years ¹⁾	Every 10,000 km (6,000 miles) or 1 year ¹⁾
– Automatic Transmission, Changing ATF	Every 60,000 km (40,000 miles)	Every 60,000 km (40,000 miles)
– DSG Transmission (6-Speed DSG), Replacing Transmission Fluid and Filter	Every 60,000 km (40,000 miles)	Every 60,000 km (40,000 miles)
– DSG Transmission (DSG) 0DD, 0DL and 0BH, Replacing Transmission Fluid	Every 60,000 km (40,000 miles)	Every 60,000 km (40,000 miles)
– Ribbed Belt, Replacing	Every 60,000 km (40,000 miles)	Every 60,000 km (40,000 miles)



Work to be completed	Market designation B. Refer to ➤ <u>A3.9 ssignment According to Mar- ket Designation", page 63 .</u>	Market designation C. Refer to ➤ <u>A3.9 ssignment According to Mar- ket Designation", page 63 .</u>
<ul style="list-style-type: none"> – Idler Rollers and Ribbed Belts, Replacing • Only applies to V8 gasoline engine 	Every 120,000 km (80,000 miles)	Every 120,000 km (80,000 miles)
<ul style="list-style-type: none"> – Camshaft Drive Toothed Belt, Replacing • Applies to gasoline and diesel engines with toothed belt 	Every 120,000 km (80,000 miles)	Every 120,000 km (80,000 miles)
<ul style="list-style-type: none"> – Coolant Pump Toothed Belt, Replacing • Applies to all gasoline engines with coolant pump toothed belt 	Every 120,000 km (80,000 miles)	Every 120,000 km (80,000 miles)
<ul style="list-style-type: none"> – Transmission Mount: Replacing • Only applies to Phaeton with trailer hitch 	Every 150,000 km (93,205.5 miles)	Every 150,000 km (93,205.5 miles)
<ul style="list-style-type: none"> – Diesel Particulate Filter, Checking 	At 180,000 km / 210,000 km (100,000 miles / 130,000 miles), then every 30,000 km (20,000 miles)	At 180,000 km / 210,000 km (100,000 miles / 130,000 miles), then every 30,000 km (20,000 miles)
<ul style="list-style-type: none"> – BorgWarner Clutch, Changing Oil 	Every 3 years	Every 3 years
<ul style="list-style-type: none"> – Front Axle Differential Lock, Changing Oil 	Every 3 years	Every 3 years
<ul style="list-style-type: none"> – Brake and Clutch System, Changing Brake Fluid 	3 years after initial registration, then every 2 years	3 years after initial registration, then every 2 years

1) whichever occurs first





3 General Information

- ⇒ [S3.1 Towing and Towing, North America", page 44](#)
- ⇒ [R3.2 Lifting with Hoist or Workshop Vehicle Jack", page 50](#)
- ⇒ [3.3, page 51](#)
- ⇒ [S3.4 Schedule Entries", page 57](#)
- ⇒ [D3.5 Diagnostic Tester, Connecting", page 57](#)
- ⇒ [I3.6 Identification Number \(VIN\)", page 60](#)
- ⇒ [D3.7 Data Label", page 61](#)
- ⇒ [W3.8 with Elevated Sulfur Content in Diesel Fuel, Not for North America Market", page 62](#)
- ⇒ [A3.9 Assignment According to Market Designation", page 63](#)
- ⇒ [O3.10 Operating Conditions", page 65](#)
- ⇒ [C3.11 Code and Engine Identification", page 65](#)
- ⇒ [W3.12 with High Air Dust Levels", page 65](#)
- ⇒ [P3.13 Plate", page 66](#)
- ⇒ [-3.14 Bio Diesel, for Vehicles Through 05/2006, Not for North America Market", page 67](#)

3.1 Tow Starting and Towing, North America

- ⇒ [E3.1.1 yes, Securing, Jetta from MY 2005 and Golf Wagon from MY 2007", page 44](#)
- ⇒ [E3.1.2 yes, Securing, Golf Wagon MY 2010, Jetta from MY 2011", page 46](#)
- ⇒ [I3.1.3 Information", page 48](#)



Note

- ◆ *Only a tow rope or tow bar may be attached to the towing eyes.*
- ◆ *The tow rope should be able to stretch to reduce the risk of damage to both vehicles. Therefore only a synthetic rope (or a rope made with a similar elastic material) should be used. It is safer, however, to use a tow bar.*
- ◆ *Avoid excessive towing effort and do not jerk. There is always a risk of the fasteners becoming overstressed and damaged when towing on unpaved roads.*
- ◆ *The battery from another vehicle should be used for starting if possible before trying to start an engine by towing.*

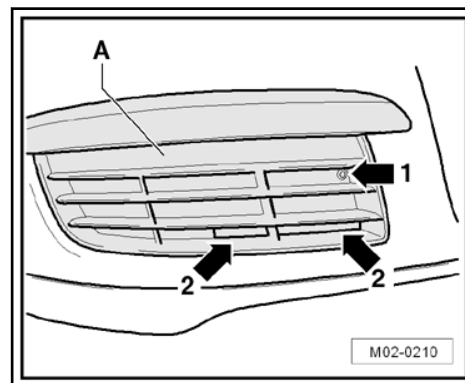
3.1.1 Towing Eyes, Securing, Jetta from MY 2005 and Golf Wagon from MY 2007

To tow the vehicle a towing eye must be installed beforehand.

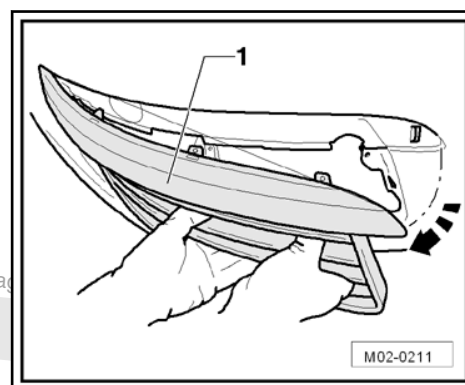
The towing eye is located in the vehicle tool kit.

Front Towing Eye:

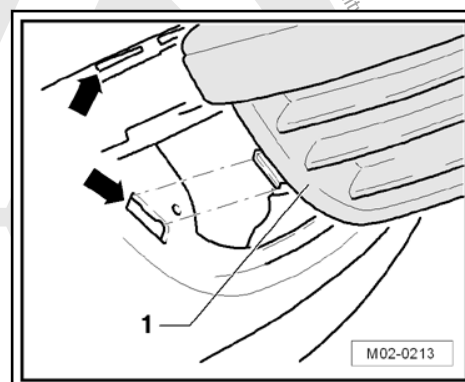
- Remove the bolt -arrow 1- from the air grille -A- using a screwdriver.



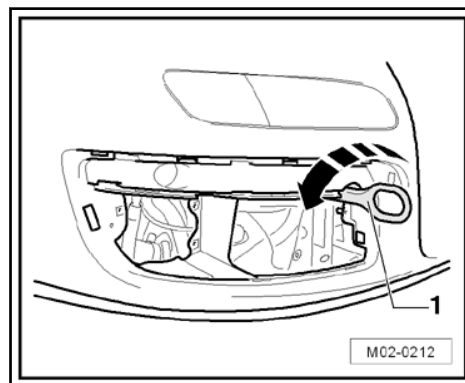
- Reach with both hands in the opening of the air grille -2 arrows-.
- Remove the air grille -1- in the direction of the arrow from the fastener.



When removing the air grille -1- from the openings of the bumper air grille -arrows- pay attention that the tabs on the air grille do not break.



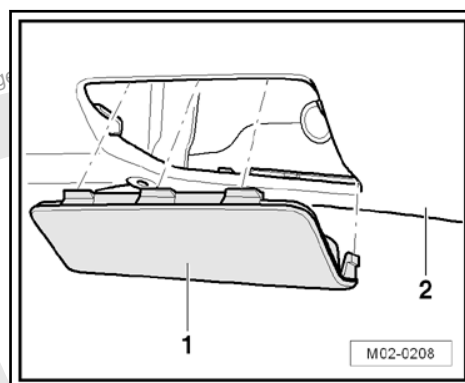
- Install the towing eye all the way in the direction of the arrow -left-hand thread- and tighten with a wrench.



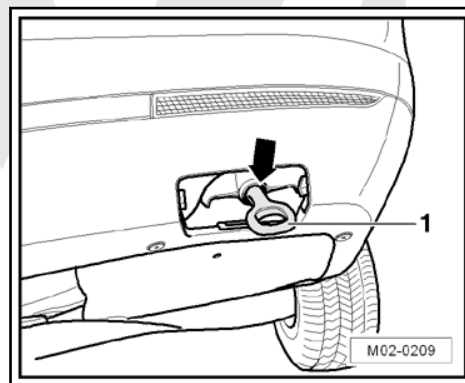
- After using remove the towing eye and add it to the vehicle tool kit. Reinstall the cover.

Rear Towing Eye:

- The threaded hole for the towing eye is located at the right rear at the bottom of the bumper.
- Remove the cover -1- in front of the threaded hole.



- Install the towing eye -1- all the way “left-hand thread” -arrow- and tighten securely using a wheel wrench.



- After using remove the towing eye and add it to the vehicle tool kit. Reinstall the cover.

3.1.2 Towing Eyes, Securing, Golf Wagon MY 2010, Jetta from MY 2011

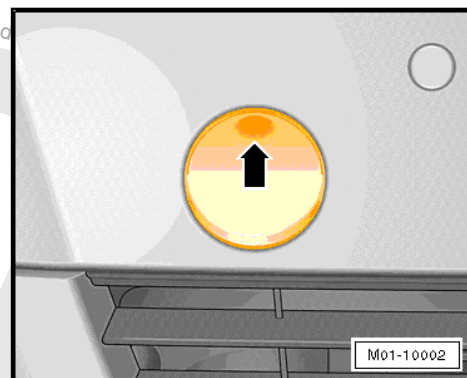
To tow the vehicle a towing eye must be installed beforehand.

The towing eye is located in the vehicle tool kit.

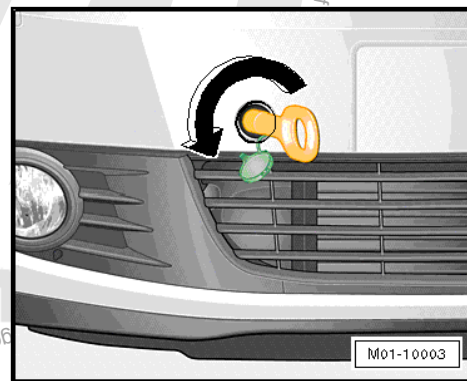


Front Towing Eye:

- The threaded hole for the towing eye is located on the right side of the front bumper behind a cover.



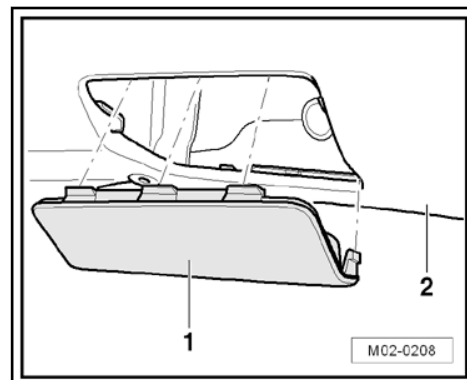
- Push on the upper area of the cover -arrow- to release the catch.
- Install the towing eye until it stops ("left-hand thread") -arrow- and tighten securely using a wheel wrench.



Rear Towing Eye:

- The threaded hole for the towing eye is located at the right rear at the bottom of the bumper.

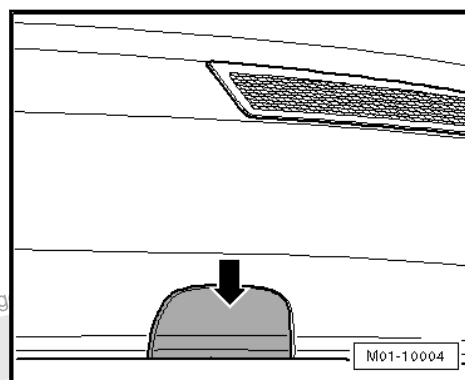
Only Golf wagon from MY 2010:



- Remove the cover -1- from the bumper cover -2-.



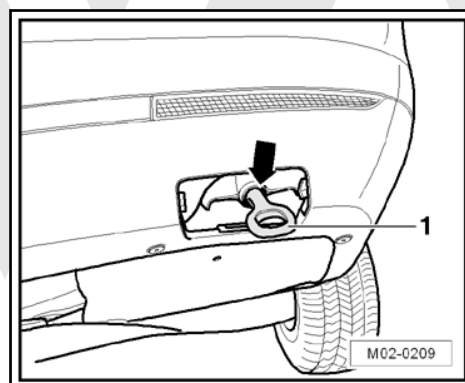
Only Jetta from MY 2011:



- Carefully push the cover forward -arrow-. A slight amount of force may be necessary to do so.

Continuation all vehicles:

- Install the towing eye -1- all the way (“left-hand thread”) -arrow- and tighten securely using a wheel wrench.



- After using remove the towing eye and add it to the vehicle tool kit. Reinstall the cover.

3.1.3 General Information

- ◆ Legal regulations concerning towing must be observed.
- ◆ Both drivers must be familiar with towing procedures. Inexperienced drivers should not attempt to tow start or tow.
- ◆ When using a tow rope the driver of the towing vehicle must engage the clutch very gently when moving off and changing gear.
- ◆ The driver of the vehicle being towed must ensure that the tow rope is always taut.
- ◆ Both vehicles must have the emergency flasher switched on - if necessary observe any country-specific regulations.
- ◆ The ignition must be switched on, so that the steering wheel is not locked and the turn signals, horn, windshield wipers, and windshield washer system can be operated.
- ◆ On vehicles without ABS since the brake booster only works with the engine running, the brake pedal must be stepped on with correspondingly more force when the engine is switched off.
- ◆ On vehicles with power steering if the engine is off more force must be used to steer.



- ◆ Without lubricants in the manual transmission and/or automatic transmissions the car may only be towed with raised drive wheels.
- ◆ For vehicles without a catalytic converter the engine with a catalytic converter at operating temperature must not be tow-started over long distances, otherwise fuel will enter the catalytic converter and can combust there. This can lead to overheating of the catalytic converter.

Notes for vehicles with a manual transmission:

- Before tow-starting, press and hold the clutch pedal and select the 2nd or 3rd gear.
- Switch the ignition on.
- When both vehicles are in motion, release the clutch pedal.
- As soon as the engine is started, push in the clutch and take the car out of gear to avoid running into the towing vehicle.

Notes for vehicles with automatic transmission:



Note

Tow starting of vehicles with automatic transmission is not possible for technical reasons.

- ◆ Selector lever position "N".
- ◆ Do not tow at speeds greater than 50 km/h (31.1 mph).
- ◆ The maximum towing distance is 50 km (31.1 miles).
- ◆ For longer distances, the front end of the vehicle must be raised.

Reason: the transmission oil pump does not work when the engine is off. The transmission is not sufficiently lubricated at higher speeds and longer distances.

When towing with a tow truck, the vehicle may only be towed with raised front wheels.

Reason, the drive axles turn backwards when the rear of the vehicle is raised. This would cause the planetary gears in the automatic transmission to achieve such high RPM that the transmission would be heavily damaged within a very short time.

Notes for AWD vehicles:

- ◆ The vehicle can be towed the same way as a two-wheel drive vehicle.
- ◆ The vehicle can be towed with a tow truck with the front or rear axle raised.

The vehicle must be towed with the rear axle raised, and the rear tires cannot turn freely, it must be made sure that the freewheel in the rear wheel is not bridged beforehand due to driving in reverse. To undo the lock up clutch, briefly shift into 1st gear and back into idle with the ignition tuned on.



3.2 Vehicle, Raising with Hoist or Workshop Vehicle Jack

⇒ [P3.2.1 recuations:", page 50](#)

⇒ [a3.2.2 nd Floor Jack Mounting Points", page 50](#)

3.2.1 Safety Precautions:

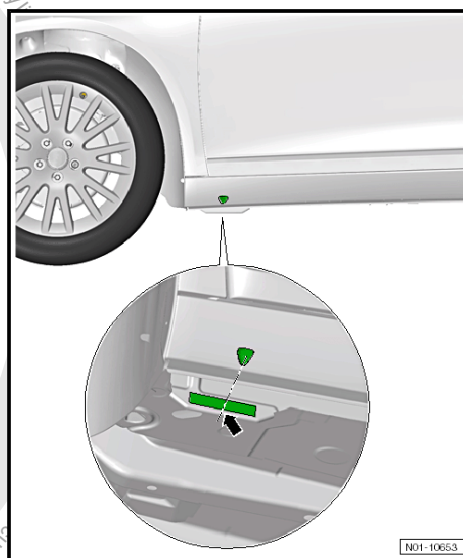


WARNING

- ◆ *Before driving the vehicle onto a workshop hoist, make sure there is enough clearance between any low-lying components and the hoist.*
- ◆ *Before driving a vehicle onto a hoist it must be ensured that the vehicle weight does not exceed the permitted load rating of the platform.*
- ◆ *Vehicle may only be lifted at points indicated in illustration in order to avoid damaging vehicle floor pan and to prevent vehicle from tipping.*
- ◆ *Never start the engine and engage a gear with vehicle lifted so long as even one wheel has contact with the floor! There is a risk of an accident if this is not observed!*
- ◆ *If work is to be performed under vehicle it must be supported by suitable stands.*

3.2.2 Hoist and Floor Jack Mounting Points

Front Mounting Point:



- Position the mounting plate near the side sill marking on the vertical floor panel reinforcement -arrow-

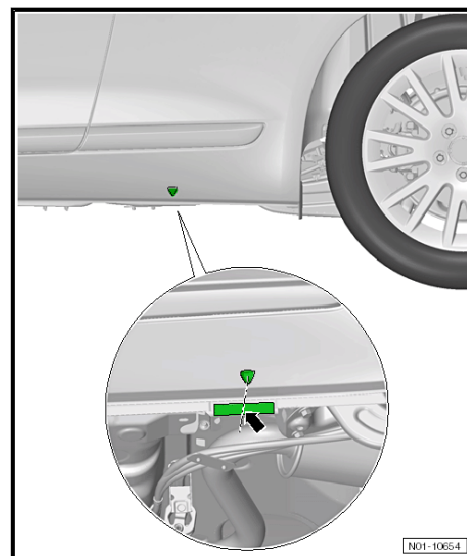


WARNING

Make sure that the side sill reinforcement contacts the center of the hoist mounting plate.



Rear Mounting Point:



- Position the mounting plate near the side sill marking on the vertical floor panel reinforcement -arrow-.



WARNING

Make sure that the side sill reinforcement contacts the center of the hoist mounting plate.

3.3 Sticker

⇒ [S3.3.1 Service Sticker, Applying at Pre-Delivery Inspection](#), page 52

⇒ [N3.3.2 ext Service Sticker, Applying](#), page 53

⇒ [D3.3.3 Data Label, Applying in Customer Maintenance Schedule](#), page 54

⇒ [E3.3.4 engine Oil Label, Applying](#), page 54

⇒ [S3.3.5 ticker, Applying](#), page 54

⇒ [W3.3.6 Warning Label](#), page 55

The labels used in the German market are described in this chapter. Labels for a specific market are supplied by the importer.

“First Service” Sticker, Applying at Pre-Delivery Inspection. Refer to ⇒ [S3.3.1 Service Sticker, Applying at Pre-Delivery Inspection](#), page 52 .

“Your Next Service” Sticker, Applying. Refer to ⇒ [N3.3.2 ext Service Sticker, Applying](#), page 53 .

“Vehicle Data Label”, Applying in Customer Maintenance Schedule. Refer to ⇒ [D3.3.3 Data Label, Applying in Customer Maintenance Schedule](#), page 54 .

Applying the “LongLife engine oil” label. Refer to ⇒ [E3.3.4 engine Oil Label, Applying](#), page 54 .

Hotline Label, Applying. Refer to ⇒ [S3.3.5 ticker, Applying](#), page 54 .

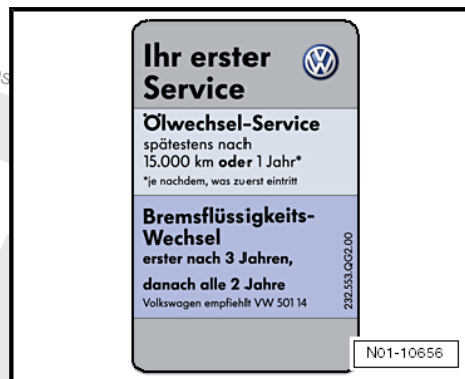
High-voltage warning label. Refer to ⇒ [W3.3.6 Warning Label](#), page 55 .



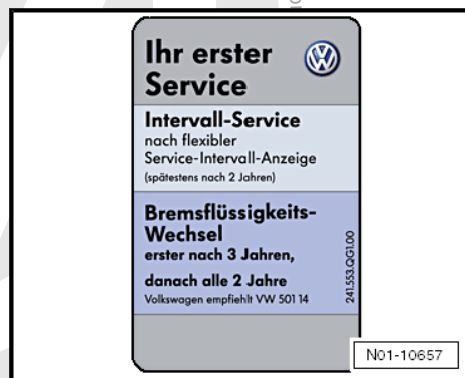
3.3.1 “First Service” Sticker, Applying at Pre-Delivery Inspection

The “Next Service” label applies to vehicles through MY 2013.
For vehicles from MY 2014 the label is discontinued.

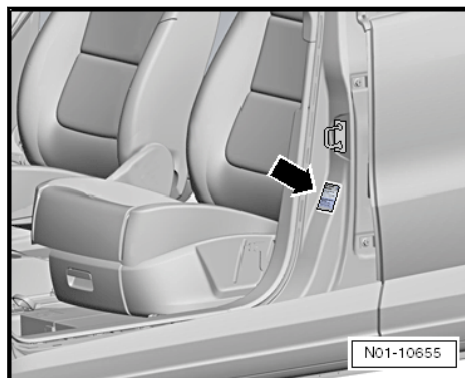
“First Service - Oil change service” Sticker on Vehicles with PR Number “QG0/QG2”. Refer to [⇒ S2.1.3 service](#), [page 13](#) .



Label “Your First Service - Service Interval” on vehicles with PR numbers “QG1”. Refer to [⇒ S2.1.2 service](#), [page 12](#) .



- Apply the label to the B-pillar -arrow on the driver side. The label is located on an instruction sheet, which is attached to the front of the vehicle literature. Destroy the instructions after applying the label.





3.3.2 “Your Next Service” Sticker, Applying

Label through 10/26/2009

Ihre nächsten Service-Termine

☐ Nach Service-Intervall-Anzeige oder

☐ Monat Jahr*
bei km*

☐ **Zusatzumfänge**

Monat Jahr*
bei km*

*Je nachdem, was zuerst eintritt

☐ **Bremsflüssigkeits-Wechsel**

Monat Jahr*
Volkswagen empfiehlt VW 501 14

N01-10658

- “Your next service” label: check off the oil change or inspection service (whichever is due next) and enter the date/mileage (kilometers).

Sticker from 11/2/2009 through 2013

Ihre nächsten Service-Termine

☐ Nach Service-Intervall-Anzeige oder

☐ Monat Jahr*
bei km*

☐ **Zusatzumfänge**

Monat Jahr*
oder bei km*

*Je nachdem, was zuerst eintritt

☐ **Gesetzliche Prüfung**

Monat Jahr*
☐ **Bremsflüssigkeits-Service**

Monat Jahr*
Volkswagen empfiehlt VW 501 14

N01-10998

- “Your Next Service” label: Check off the oil change service or inspection service or the legally required test, for example, vehicle safety inspection or inspecting the gas system (whichever one is due next) and enter the date and mileage (kilometers).

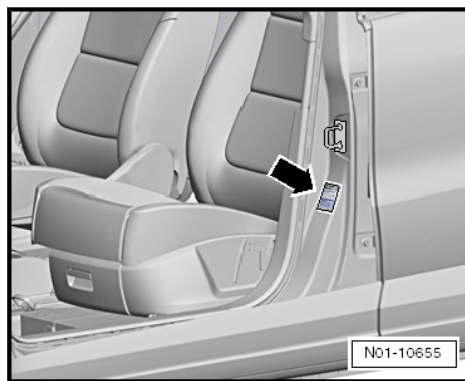


Note

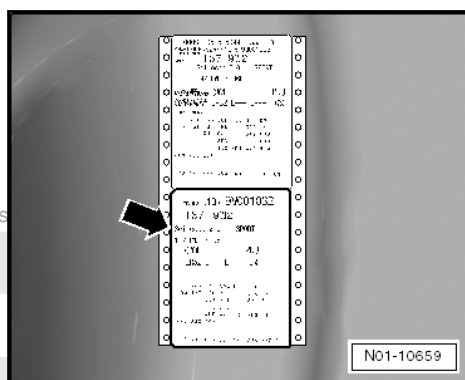
A new label was introduced in 11/02/2009.

Service Intervals. Refer to ➔ [T2.2 ables for Market Designation A”, page 20](#) .

- Apply the sticker to the driver side B-pillar -arrow-.



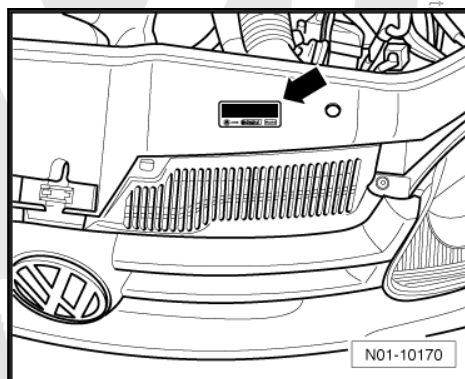
3.3.3 “Vehicle Data Label”, Applying in Customer Maintenance Schedule



- Of the two vehicle data labels, apply the bottom one -arrow- in the customer Maintenance booklet.

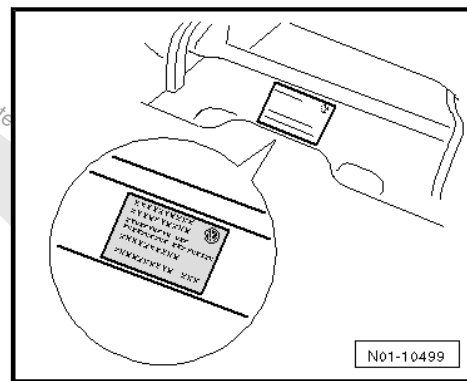
3.3.4 “LongLife Engine Oil” Label, Applying

- For vehicles with flexible service (PR number QG1), apply sticker as follows.
- Attach the sticker -K 69.5121.50.00- -arrow- as shown on the left side of the lock carrier (as seen in driving direction).



3.3.5 Hotline Sticker, Applying

- Attach the hotline sticker as shown on the inside of the glove compartment lid.



- Only applies to Germany

3.3.6 High-Voltage Warning Label

Warning labels on high-voltage components. Refer to ➤ [page 55](#).

Overview of high-voltage warning label in the upper engine compartment. Refer to ➤ [page 56](#).

Overview of high-voltage warning label in the lower engine compartment. Refer to ➤ [page 56](#).

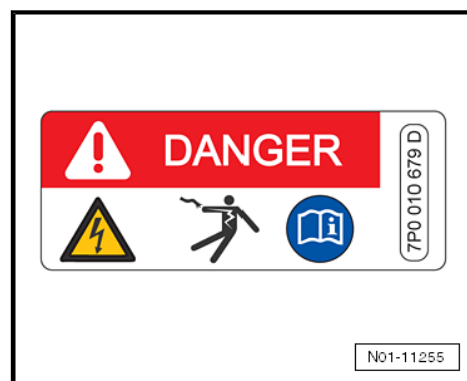
Warning labels on high-voltage components:



Note

If any high-voltage warning labels are found to be missing from high-voltage components during the visual inspection, they must be replaced!

Warning labels on high-voltage components:

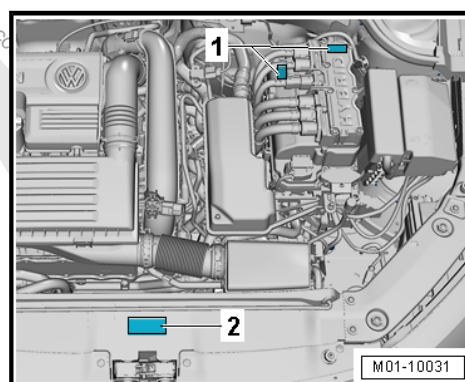




Warning label on the lock carrier:

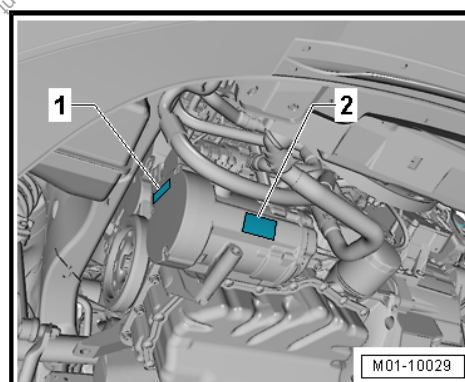


Overview of high-voltage warning label in the upper engine compartment:



- Visual Inspection.
- Check the warning label -1- on the Electric Drive Power and Control Electronics -JX1- is in good condition.
- Check that the warning label -2- on the lock carrier is in good condition.

Overview of high-voltage warning label in the lower engine compartment:



- Remove the "lower" engine compartment cover (noise insulation). Refer to ➔ [E4.34 Engine Compartment Cover \(Noise Insulation\), Removing and Installing](#), page 185 .
- Visual Inspection.
- Check that the warning labels -1- and -2- on the Electrical A/C Compressor - V470- is in good condition.



- Install the engine compartment cover (noise insulation) “bottom”. Refer to ➤ [E4.34 Engine Compartment Cover \(Noise Insulation\), Removing and Installing](#), page 185.

3.4 Maintenance Schedule Entries

If a component that is being replaced according to the specified replacement interval by the manufacturer, for example, the toothed belt, then the time period for the new replacement interval begins from the time the component is replaced.

- For this reason it is very important to document every time these components are replaced in the maintenance schedule.
- This also applies to components that were replaced earlier than their scheduled replacement interval.



Note

- ◆ When using an “Original Replacement Part Kit”, determine if it is technically necessary to use all of the components that come in the kit.
- ◆ If it is necessary to replace more components than what is technically required, always inform the customer before performing the repair.

3.5 Vehicle Diagnostic Tester, Connecting

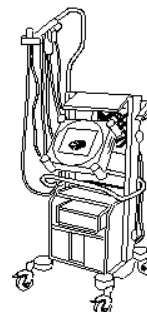
Special tools and workshop equipment required

- ◆ Vehicle Diagnostic Tester

- ◆ Vehicle Diagnostic Tester

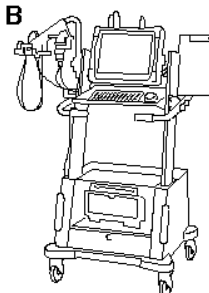
- ◆ Vehicle Diagnosis System - Diagnosis Lead -VAS 5051B/1-

VAS 5051 A



W00-10224

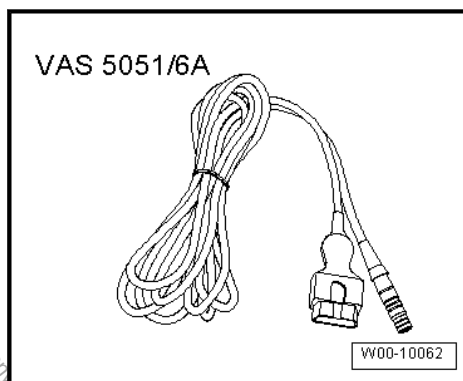
VAS 5051 B



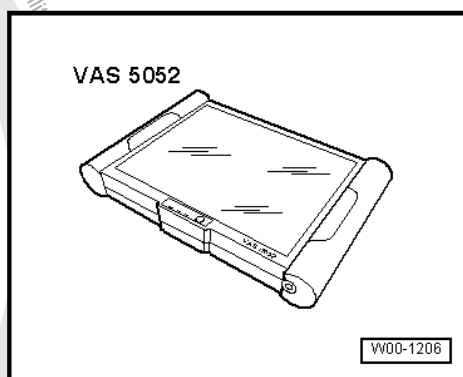
W00-10343



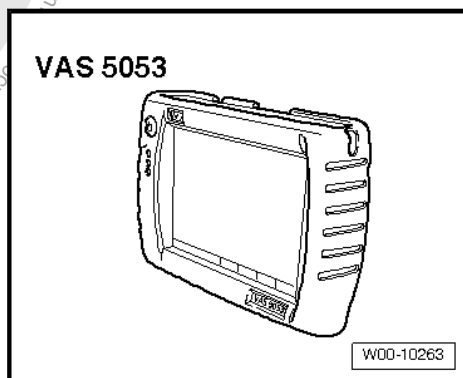
- ◆ Vehicle Diagnosis System - Diagnostic Cable -VAS 5051/6A-



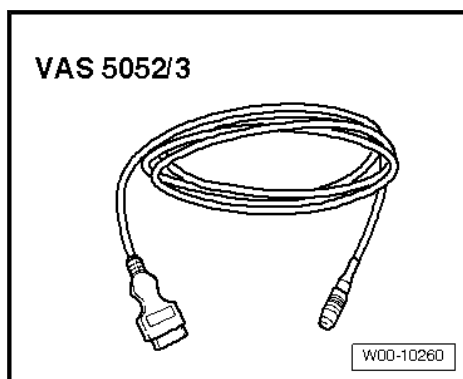
- ◆ Vehicle Diagnostic Tester or successor models.



- ◆ Vehicle Diagnostic Tester

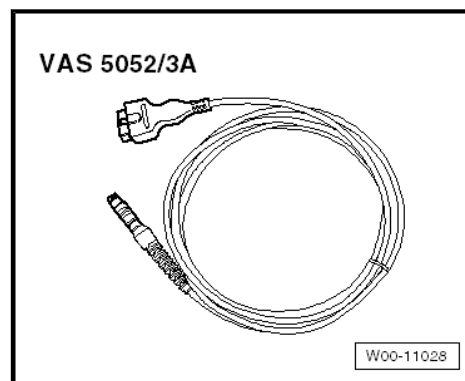


- ◆ Vehicle Diagnostic Tester - Diagnostic Cable - 5m (-16.4 feet) -VAS 5052/3-

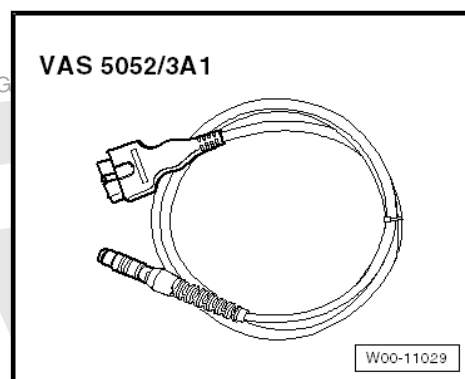




- ◆ Vehicle Diagnostic Tester - Diagnostic Cable - 5m (-16.4 feet) -VAS 5052/3 A-



- ◆ Vehicle Diagnostic Tester - Diagnostic Cable - 5m (-16.4 feet) -VAS 5052/3 A-1-



Note

Make sure the selected Vehicle Diagnostic Tester is only used with the accompanying diagnostic cable.



WARNING

- ◆ *During a road test always secure testing and measuring equipment on the back seat.*
- ◆ *While driving only the passenger may operate this equipment.*

- Perform the following procedure:



- Connect the diagnostic cable connector to the diagnostic connection.
- Turn on the Vehicle Diagnostic Tester.
- Switch the ignition on.

Follow the instructions on the screen to start the desired functions.

3.6 Vehicle Identification Number (VIN)

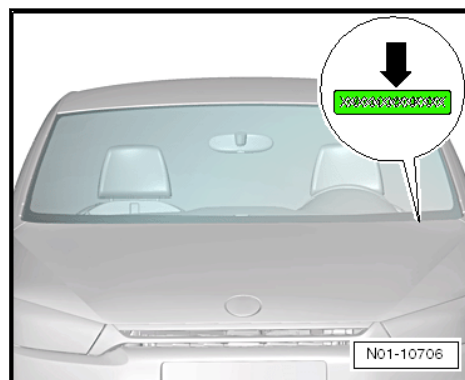
⇒ [o3.6.1 n Lower Edge of Windshield", page 60](#)

⇒ [o3.6.2 n Longitudinal Member Extension", page 61](#)

⇒ [V3.6.3 INs", page 61](#)

- ◆ VIN on Lower Edge of Windshield. Refer to ⇒ [o3.6.1 n Lower Edge of Windshield", page 60](#) .
- ◆ VIN on Longitudinal Member Extension. Refer to ⇒ [o3.6.2 n Longitudinal Member Extension", page 61](#) .
- ◆ VIN Decoding. Refer to ⇒ [V3.6.3 INs", page 61](#) .

3.6.1 VIN on Lower Edge of Windshield



The VIN -arrow- is on the left side of the vehicle in the windshield, near the windshield wiper mount. It is visible from outside.



3.6.2 VIN on Longitudinal Member Extension

Vehicle Identification Number (VIN) is located on extension of longitudinal member -arrow-.

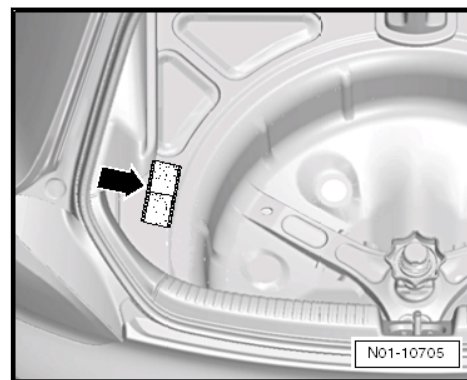


3.6.3 Decoding VINs

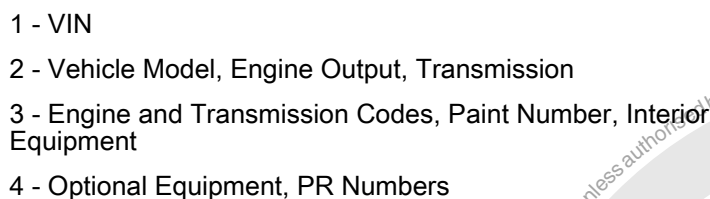
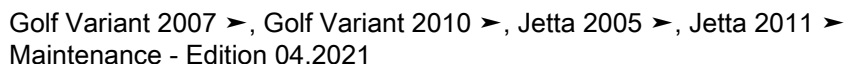
3VW	DG7	1K2 / 1K5	X	5	M	600015
Manufacturer identification	Filler character	Type	Filler character	MY 2005	Production facility	Serial number

3.7 Vehicle Data Label

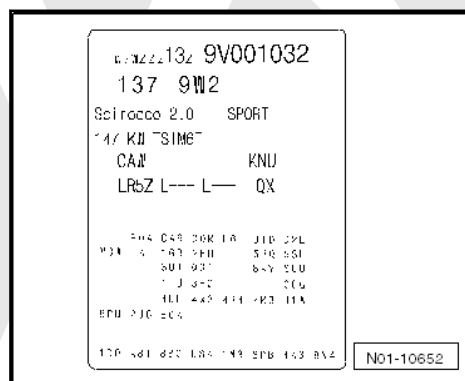
The vehicle data label -arrow- is located in the spare wheel well on the left side. The vehicle data label is also in the customer maintenance schedule.



The label contains the following vehicle data:



The sticker inside the customer maintenance schedule contains the same information. The legend is under the sticker.



3.8 Countries with Elevated Sulfur Content in Diesel Fuel, Not for North America Market



On vehicles with a TDI PD and VEP engines perform the following marked oil change service »every 7.500 km (5,000 miles)«.

Countries with Elevated Sulfur Content in Diesel Fuel			
Egypt	Jamaica	Morocco	Saudi Arabia
Armenia	Jordan	Mauritius	Zimbabwe
Bahrain	Yugoslavia (Serbia, Montenegro, Vojvodina and Kosovo)	Macedonia	Sri Lanka
Bangladesh	Cambodia	Moldova	South Africa
Chile	Kazakhstan	Mozambique	Surinam
Dominican Republic	Kenya	Myanmar	Tadzhikistan
El Salvador	Columbia	New Caledonia	Tanzania
Ecuador	Cuba	Nigeria	Turkey



Countries with Elevated Sulfur Content in Diesel Fuel			
Ghana	Kuwait	Oman	Uruguay
Guatemala	Lebanon	Pakistan	Uzbekistan
Honduras	Madagascar	Panama	Venezuela
Indonesia	Malawi	Papua New Guinea	United Arab Emirates
Iraq	Malaysia	Peru	Vietnam
Iran	Mali	Russia (east & west)	

3.9 Country Assignment According to Market Designation

Market designation A	Market designation B	Market designation C
Albania	Afghanistan	Ethiopia
Belgium	Egypt	Benin
Bosnia-Herzegovina	Algeria	Botswana
Bulgaria	Angola	Brazil
Denmark	Equatorial Guinea	Burkina Faso
Germany	Argentina	Burundi
Estonia	Armenia	China
Finland	Azerbaijan	Democratic Republic of the Congo
France	Australia	Djibouti
Gibraltar	Bahamas	Ivory Coast
Greece	Bangladesh	Eritrea
Great Britain / North Ireland	Belize	Gabon
Ireland	Bhutan	Gambia
Iceland	Bolivia	Ghana
Italy (San Marino, Vatican city)	Bermuda	Guinea
Japan	Cayman Islands	Guinea-Bissau
Canada	Brunei	Hong Kong
Cape Verde	Chile	Iran
Croatia	Costa Rica	Cameroon
Liechtenstein	Dominican Republic	Kenya
Latvia	Ecuador	Lesotho
Lithuania	El Salvador	Liberia
Luxembourg	Tahiti	Libya
Malta	Saint Martin (French)	Madagascar
Macedonia	French Guiana	Malawi
Monaco	Georgia	Mali
Montenegro	Guadeloupe	Morocco
New Zealand	Guatemala	Martinique
Netherlands	Guyana	Mauritania
Norway	Haiti	Mauritius
Austria	Honduras	Mayotte
Poland	India	Mozambique
Portugal	Indonesia	Namibia
Romania	Israel	Republic of Niger
Sweden	Jamaica	Nigeria



Market designation A	Market designation B	Market designation C
Switzerland	Cambodia	Pakistan
Serbia	Caribbean LHD traffic	Palestine
Slovakia	Kazakhstan	Republic of Congo
Slovenia	Kyrgyzstan Republic	Rwanda
Spain (Andorra, Balearic Islands, Canary Islands)	Columbia	Saint Barthélemy
South Korea	Cuba	Zambia
Czech Republic	Laos	Saudi Arabia
Hungary	Malaysia	Senegal
USA	Mexico	Seychelles
Cyprus	Moldova	Sierra Leone
	Mongolia	Zimbabwe
	Myanmar	Somalia
	Nepal	Sudan
	New Caledonia	Surinam
	Nicaragua	Swaziland
	Overseas territories of the Netherlands Aruba, Curacao, St Martin (Netherlands)	Tanzania
	North Korea	Togo
	Panama	Trinidad and Tobago
	Papua New Guinea	Chad
	Paraguay	Tunisia
	Peru	Uganda
	Philippines	West Sahara
	Puerto Rico	Central African Republic
	Reunion	South Sudan
	Russia	
	Singapore	
	Sri Lanka and Maldives	
	South Africa	
	Tadzhikistan	
	Taiwan	
	Thailand	
	Turkey	
	Turkmenistan	
	Ukraine	
	Uruguay	
	Uzbekistan	
	Venezuela	
	United Arab Emirates (without Abu Dhabi and Dubai)	
	Vietnam	
	Belarus	
	Fiji	



3.10 Severe Operating Conditions

Under severe operating conditions, it is necessary to have some work performed before the next service is due or between the specified service intervals.

Severe Operating Conditions

- Constant short-distance driving or stop-and-go driving in the city
- High proportion of cold starts
- Operating the vehicle in areas with extremely low temperatures for an extended period of time
- Frequently left in idle for longer periods, for example, taxis
- Frequently driving full throttle or with a high load or a trailer
- Running with diesel fuel with high sulfur content
- Frequently operating in areas with excessive dust

3.11 Engine Code and Engine Identification



Note

- ◆ From MY 2008, four-digit engine codes are used.
- ◆ The first three characters tell the engine structure. They are also stamped into the engine as before.
- ◆ The fourth digit describes the engine output and depends on the engine control module.
- ◆ Four-digit engine codes are on the type plate, the vehicle data label and the engine control module.
- ◆ Gasoline engines. Refer to »Engine«⇒ Rep. Gr. 00; Technical Data/Engine Serial Number »Technical Data/Engine Serial Number«.
- ◆ Diesel engines. Refer to »Engine«⇒ Rep. Gr. 00; Technical Data/Engine Serial Number »Technical Data/Engine Serial Number«.
- ◆ on vehicle data label. Refer to ⇒ [D3.7 ata Label", page 61](#) .



Note

For technical reasons it is possible the links do not go to the correct chapter. If that is the case, please look up the procedure manually in the corresponding infomedia.

3.12 Countries with High Air Dust Levels

Afghanistan	Gabon	Libya	Sierra Leone
Egypt	Gambia	Macao	Zimbabwe
Algeria	Georgia	Madagascar	Singapore
Angola	Ghana	Malawi	Somalia
Equatorial Guinea	Greece	Maldives (India subcontinent)	Sri Lanka
Argentina	Guadeloupe	Mali	South Africa
Armenia	Guatemala	Morocco	Sudan
Azerbaijan	Guinea	Martinique	Suriname



Ethiopia	Guinea-Bissau	Mauritania	Swaziland
Australia	Guyana	Mauritius	Syria
Bahrain	Honduras	Mexico	Tadzhikistan
Bangladesh	Hong Kong	Mongolia	Tanzania
Barbados	India	Mozambique	Thailand
Belize	Indonesia	Myanmar (Burma)	Togo
Benin (Dahomey)	Iraq	Namibia	Chad
Bhutan	Iran	Nepal (India subcontinent)	Tunisia
Bolivia	Israel	Nicaragua	Turkey
Botswana	Yemen	Republic of Niger	Turkmenistan
Brazil	Jordan	Nigeria	Uganda
Brunei	California	North Korea	Uruguay
Burkina Faso (Upper Volta)	Cambodia	Oman	USA
Burundi	Cameroon	Pakistan	Uzbekistan
Chile	Kazakhstan	Palestine	Venezuela
Costa Rica	Qatar	Panama	United Arab Emirates / Abu Dhabi
Curacao	Kenya	Paraguay	Vietnam
Democratic Republic of the Congo	Kyrgyzstan Republic	Peru	White Russia (Belarus)
Djibouti	Columbia	Puerto Rico	West Sahara
Dominican Republic	Congo	Rest of Asia ¹⁾	Central African Republic
Dubai	Cuba	Reunion	China
Ecuador	Kuwait	Rwanda	Ukraine
El Salvador	Laos	Russian Federation	
Ivory Coast	Lesotho	Zambia	
Eritrea	Lebanon	Saudi Arabia	
French Guiana	Liberia	Senegal	

¹⁾ Fiji, Papua New Guinea, Solomon Islands, Tonga, Vanuatu

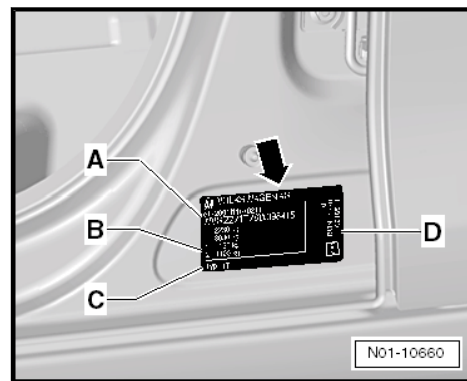
3.13 Type Plate



Note

Vehicles for some countries do not have a type label.

The type plate -arrow- is visible at the bottom of the B-pillar when the left front door is open.



The type plate contains the following vehicle data:

A - VIN

B - Variable Specifications, for example, Axle Loads, Total Permissible Weights, Permissible Towing Weights

C - Type number

D - Engine Code

3.14 RME - Bio Diesel, for Vehicles Through 05/2006, Not for North America Market



Note

The RME suitability for vehicles from 06/2006 is discontinued.

Only vehicles that are released by Volkswagen and are standard or optionally (PR No. 2G0) equipped for the use of RME biodiesel fuel are allowed be driven with RME biodiesel fuel.



Caution

- ◆ *If RME biodiesel is used although the vehicle is not designed for it, the fuel supply system may be damaged.*
- ◆ *When filling tank with biodiesel, only use ME fuel corresponding to EN 14214 (FAME).*
- ◆ *If bio diesel is used that differs from the norm the fuel filter can be blocked.*

RME biodiesel must correspond to EN 14214 (FAME).

- ◆ RME means "Rapeseed oil fatty acid-Methyl-Ester".
- ◆ EN means "Euro-Norm".
- ◆ FAME means "Fatty Acid Methyl Ester".

The RME biodiesel capability of a vehicle from the factory can be recognized by PR number 2G0 on vehicle data plate. Refer to [⇒ D3.7 ata Label", page 61](#) .

RME biodiesel characteristics

- ◆ When operating with biodiesel, mileage could be minimally reduced.
- ◆ When operating with biodiesel, fuel consumption could be minimally increased.



- ◆ RME can be used in the winter to approximately -10°C (14 °F)
- ◆ At an exterior temperature under -10 °C (14 °F) it is recommended to use winter diesel fuel.



Note

- ◆ *When operating with bio diesel with pay attention to the change intervals for draining water and changing the fuel filter. Refer to ➤ [T2.2 ables for Market Designation A", page 20](#).*
- ◆ *If the vehicle is planned to be parked for more than approximately two weeks, we recommend that beforehand the vehicle be filled with conventional diesel fuel and be driven a distance of approximately 50 km (31.1 miles), to prevent damage to the injection system.*







4 Procedure Descriptions

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- ⇒ P4.5 assenger Airbag, Checking Key Switch and On/Off Function", page 79
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- ⇒ [E4.34 ngine Compartment Cover \(Noise Insulation\), Removing and Installing", page 185](#)
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4.1 Removable Trailer Hitch, Checking and Cleaning If Necessary

This chapter explains how to check the removable trailer hitch and how to service it if necessary.

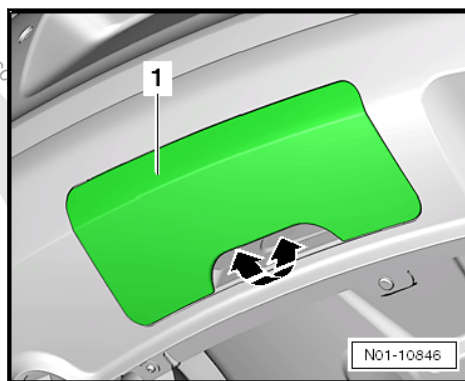


Note

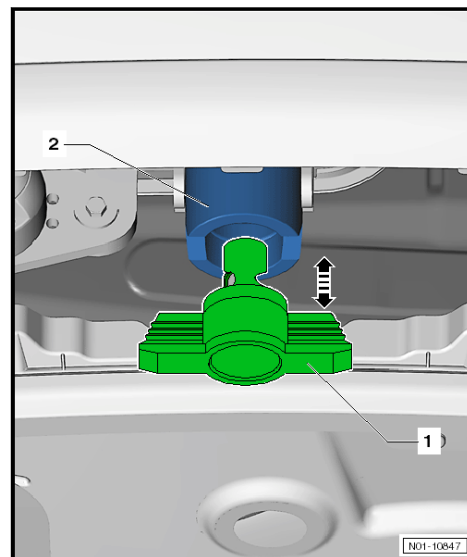
Note that checking the trailer hitch is included in the Service. Servicing is a repair procedure and has a separate charge. It must be requested by the customer.

Checking

- Remove the cover -1-

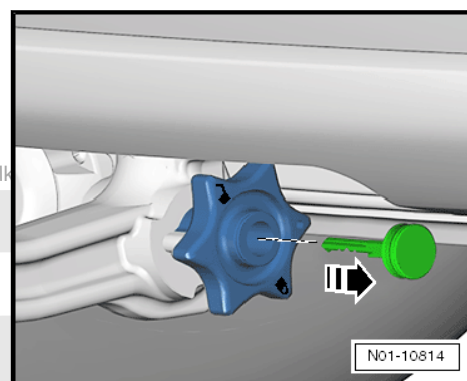


- Remove the cap -1- from the ball head mount -2-.



- Insert the ball head into the mount.

After the ball head is installed, the green marking on the hand wheel must match up with the white mark on the ball head. The hand wheel must make complete contact. The trailer hitch lock must lock when the key is removed. If this does not happen, perform the following repair.

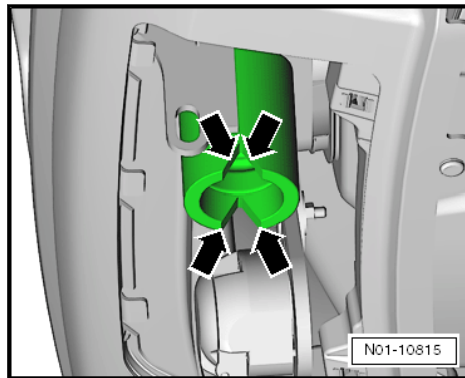


Note

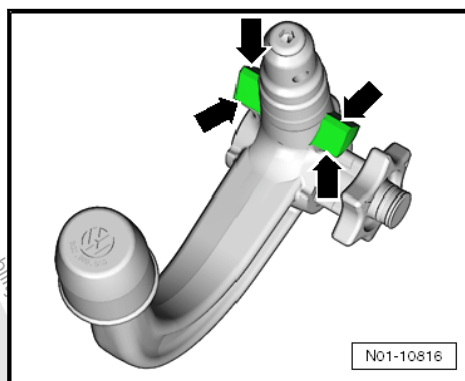
If it is necessary to service the ball head, discuss this first with the customer. Servicing the ball head has a separate charge.

Procedure

- Check the surfaces -arrows- on the ball head mount for corrosion.



- If there is corrosion on the surfaces, scrape it off with a three sided scraper then clean the surface with silicone remover.
- Apply a light coat of grease G 000 650 or G 000 150 to the cleaned surfaces.
- Check the surfaces -arrows- on the ball head for corrosion.

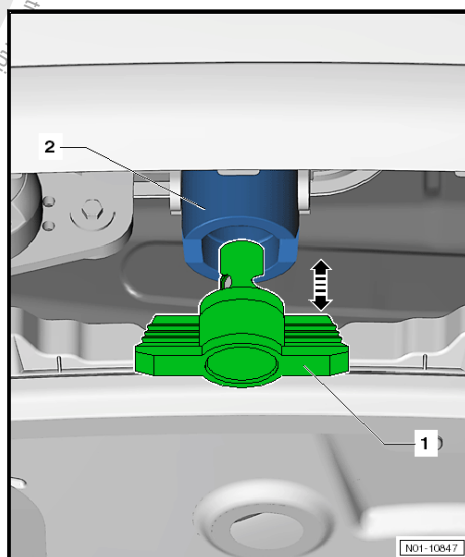


If there is corrosion on the surfaces, scrape it off with a three sided scraper then clean the surface with silicone remover.

Apply a light coat of grease G 000 650 or G 000 150 to the cleaned surfaces.

Make sure the ball head fits correctly inside the mount. Refer to [page 72](#).

Install the cap -1- into the ball head mount -2-.

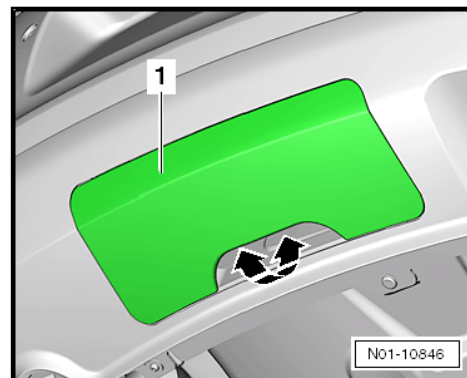




Note

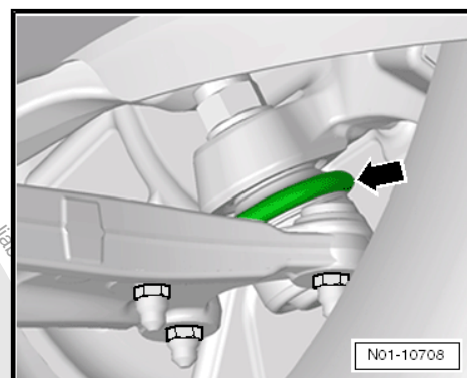
If the cap is missing or damaged, a new one must be installed to prevent corrosion around the ball head mount. Refer to the ➔ Electronic Parts Catalog (ETKA).

- Install the cover -1-.



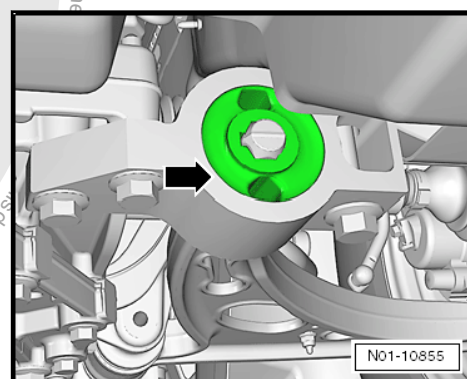
4.2 Ball Joints and Axle Bearing, Visually Inspecting

- Check the ball joint boots -arrow- for leaks and damage.

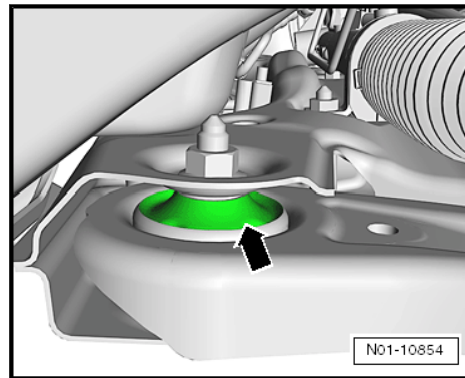


Check the axle bearing -arrow- for the following damage:

**Axle Bearing Jetta from MY 2005, Golf Wagon from MY 2007,
Golf Wagon from MY 2010**



Axle Bearing Jetta from MY 2011



- ◆ Large cracks, tears or cuts in the rubber piece.
- ◆ Complete tear of the connection between rubber molded part and metal.
- ◆ Large amount of play between the bearing and the axle components, which can significantly influence the bearing negatively.



Note

Rips and tears that are only on the surface such as small detachments between the rubber molded part and metal do not influence the function of the elastokinematic bearing and are not cause for concern.

4.3 Automatic Headlamp Control (Automatic Headlamps) and Cornering Lamp (Stationary Cornering Lamp), Performing Function Test

⇒ [H4.3.1 eadlamp Control, Checking Functionality", page 76](#)

⇒ [C4.3.2 ornering Lamp, Checking", page 77](#)

4.3.1 Automatic Headlamp Control, Checking Functionality



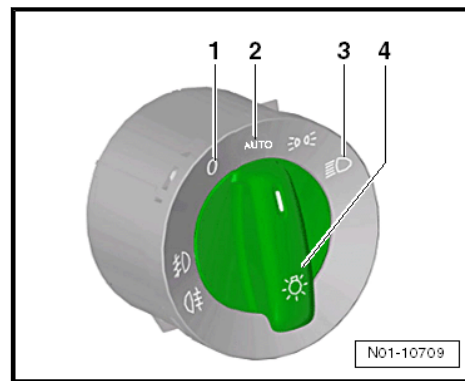
Note

The automatic headlamp control is also called automatic headlamps.

- Vehicle must be in daylight.

Checking in day or in brightness

- Switch the ignition on.
- Turn the light switch -4- to the automatic headlamp control position -2-.

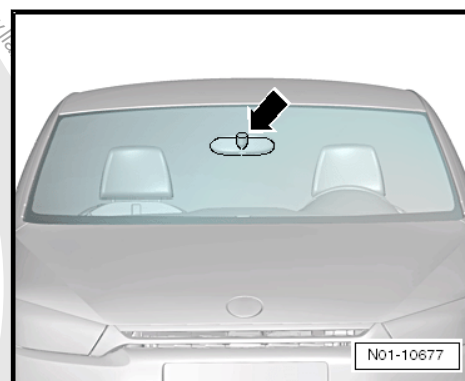


The headlamp should not come on when it is bright.

Checking at night or in darkness

- Ignition is switched on
- The headlamp switch is in the automatic headlamp control position.

Rain/light recognition sensor is secured to the interior rearview mirror retainer.

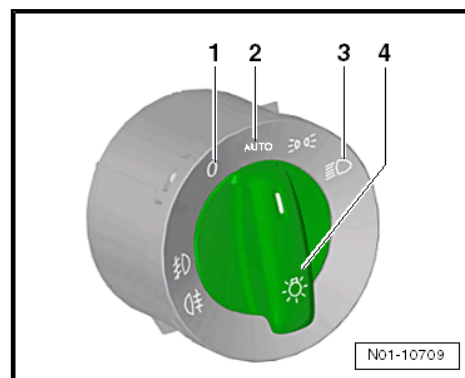


Rain/light recognition sensor is located in upper center area of front windshield -arrow-.

- Cover the base of the interior rearview mirror -arrow- by hand or with some suitable object.

The decrease in light is measured and the headlamps are switched on.

- Turn the light switch -4- to 0 -1- and turn off the ignition.



4.3.2 Static Cornering Lamp, Checking

- Vehicle parked, steering wheel in straight ahead position



Note

- ◆ *Vehicles with static cornering lamps have an extra bulb inside the headlamp or the fog lamps perform this function.*
- ◆ *The static cornering lamp only functions in conjunction with the low beams.*
- Turn on the ignition and the low beams.
- Turn steering wheel one turn to the right out of straight position and check in right headlamp whether cornering lamp bulb comes on.
- Turn the steering wheel one turn to the left out of straight position and check in left headlamp whether the cornering lamp bulb comes on.

Cornering light must go out when steering wheel is in straight position.

4.4 Automatic Transmission 09G, Changing ATF

- »Drivetrain/Automatic Transmission«. Refer to ⇒ Drivetrain/Automatic Transmission; Rep. Gr. 37; ATF Level, Checking/ATF, Draining and Filling »ATF Level, Checking/ATF, Draining and Filling«.

Hot Climate Countries

Afghanistan	Egypt	Algeria
Angola	Equatorial Guinea	Ethiopia
Australia	Bahrain (GCC)	Benin (Dahomey)
Botswana	Brunei	Burkina Faso (Upper Volta)
Burundi	China	Democratic Republic of Congo
Djibouti	Dubai (AGCC)	Ivory Coast
Eritrea	Gabon	Gambia
Ghana	Guinea	Guinea-Bissau
India	Indonesia / (Borneo)	Iraq
Iran	Israel	Japan
Yemen (AGCC)	Jordan	Cameroon
Qatar (AGCC)	Kenya	Congo
Kuwait (AGCC)	Lesotho	Lebanon
Liberia	Libya	Madagascar
Malawi	Malaysia	Mali
Morocco	Mauritania	Mauritius
Mexico	Mozambique	Namibia
Republic of Niger	Nigeria	Oman (AGCC)
Palestine	Puerto Rico	Rwanda
Zambia	Saudi Arabia (AGCC)	Senegal
Sierra Leone	Zimbabwe	Singapore
Somalia	South Africa	Sudan
Swaziland	Syria	Tanzania
Thailand	Togo	Chad
Tunisia	Turkey	Uganda



United States of America	United Arab Emirates / Abu Dhabi (AGCC)	West Sahara
Central African Republic		

4.5 Front Passenger Airbag, Checking Key Switch and "On/Off Function"

⇒ [P4.5.1 assenger Airbag, Checking ON/OFF Switch, Jetta from MY 2005, Golf Wagon from MY 2007", page 79](#)

⇒ [P4.5.2 assenger Airbag, Checking ON/OFF Switch, Golf Wagon from MY 2010, Jetta from MY 2011", page 81](#)

4.5.1 Front Passenger Airbag, Checking ON/OFF Switch, Jetta from MY 2005, Golf Wagon from MY 2007

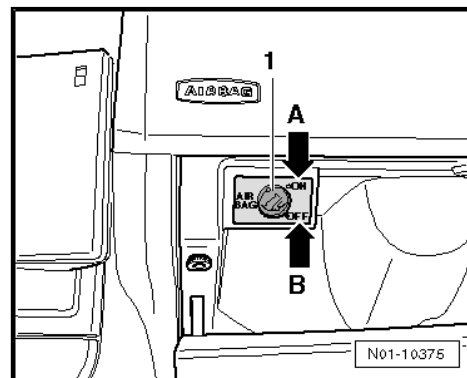


Note

The "Airbag ON/OFF" switch is located inside the glove compartment.

Front Passenger Airbag, Checking Key Switch and "On/Off Function"

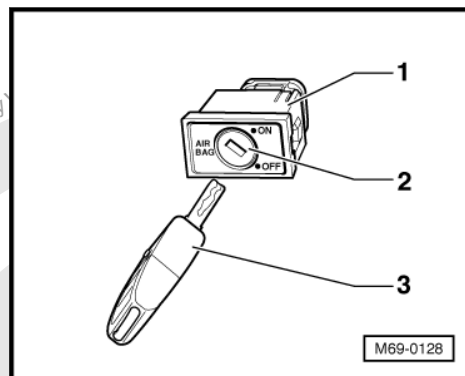
The front passenger airbag can be deactivated with the key switch -1-. The front passenger side thorax airbag and all other airbags in the vehicle remain functional.



WARNING

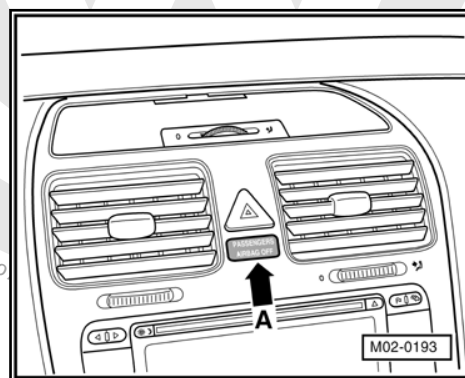
The passenger airbag must be deactivated only if in exceptional cases when a child seat, in which a child is seated with his/her back in direction of travel, must be installed on the passenger seat.

- Check the "On/Off function" of the key switch as follows:



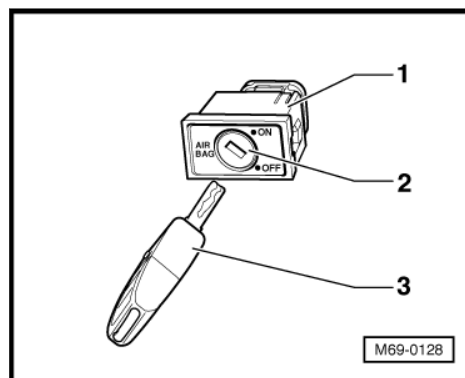
Front passenger airbag switched off

- Switch off the ignition.
- With the ignition key -3- turn the key switch -2- in the position "AIRBAG OFF". The key switch must point to "OFF".
- Check if with the ignition switched in the indicator lamp in the instrument panel -arrow A- remains illuminated.

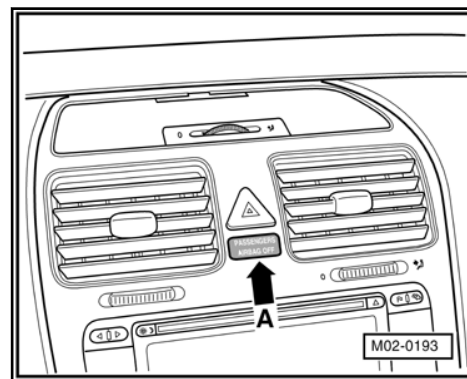


- Switch off the ignition.

Front passenger airbag is switched on



- Switch off the ignition.
- With the ignition key -3- turn the key switch -2- in the position "ON". The key switch must point to "ON".



- Check if with the ignition switched on the indicator lamp -arrow A- in the instrument panel does “not” turn on.
- Switch off the ignition.

4.5.2 Front Passenger Airbag, Checking ON/OFF Switch, Golf Wagon from MY 2010, Jetta from MY 2011

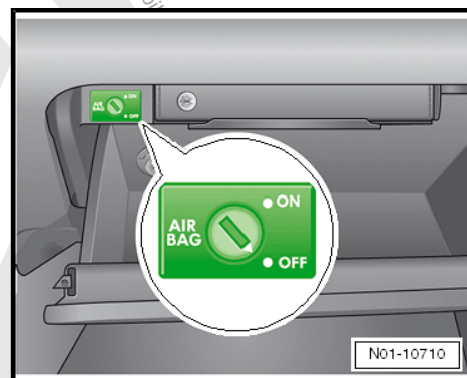


Note

The “Airbag ON/OFF” switch is located inside the glove compartment.

Front Passenger Airbag, Checking Key Switch and “On/Off Function”

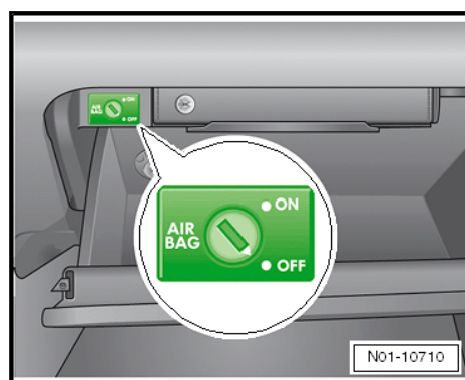
- Using the key, turn the switch to “AIRBAG OFF”.



- Switch the ignition on.
- The “PASSENGER AIRBAG OFF” display -arrow- must also light up after the self-test (the front passenger airbag is deactivated).



- Switch off the ignition.
- Using the key, turn the switch to “AIRBAG ON”.



- Switch the ignition on.
- The control indicator “PASSENGER AIRBAG OFF”-arrow must go out after the self-test (front passenger airbag activated).



- Switch off the ignition.

4.6 Battery, Checking Battery Clamps for Secure Fit

⇒ [C4.6.1 Compartment Battery”, page 83](#)

⇒ [C4.6.2 Compartment Battery”, page 85](#)

Special tools and workshop equipment required



- ◆ Torque Wrench 1331 5-50Nm -V.A.G 1331-

V.A.G 1331



W00-0427



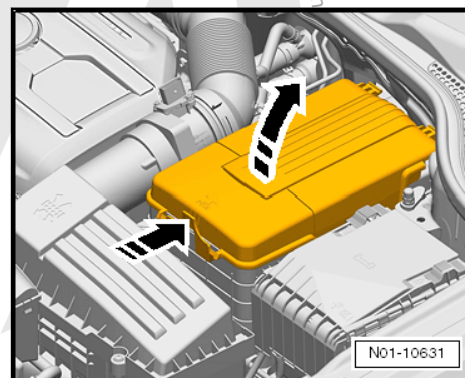
Note

- ◆ *Tight battery terminal clamps assure trouble-free battery function and long service life.*
- ◆ *Make sure that the terminal clamp when securing is resting completely on the battery terminal.*

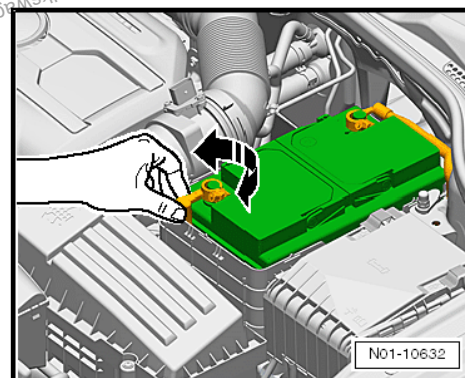
4.6.1 Engine Compartment Battery

Perform the following procedure:

- Open the battery trim cover if equipped.



- Move the battery negative and positive terminal clamps back and forth to make sure they are securely attached.



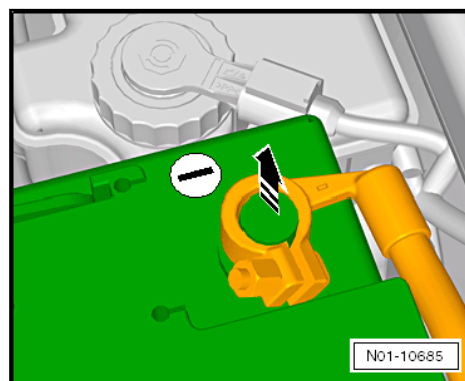


WARNING

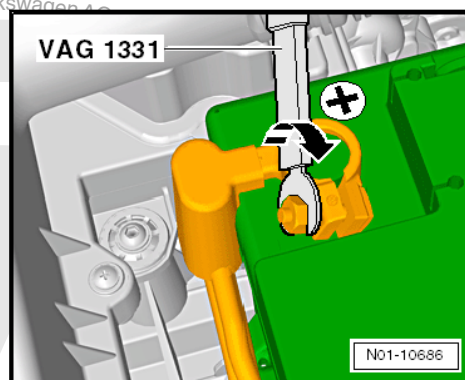
If the battery terminal clamp on the positive terminal is loose, disconnect the battery terminal clamp on the negative terminal first to prevent an accident.

If the battery terminal clamp on positive terminal is NOT secure:

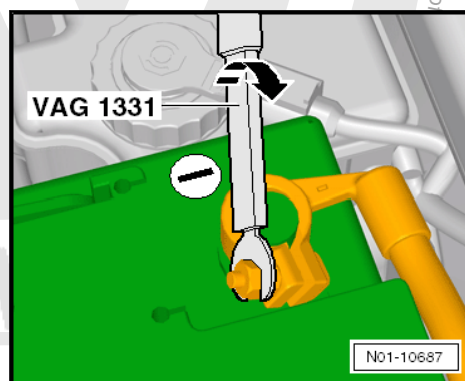
- Loosen and remove the -NEGATIVE- battery terminal clamp.



- Tighten the -POSITIVE- battery terminal clamp using the Torque Wrench 5-50Nm -V.A.G 1331- and Torque Wrench 1331 Insert - Reversible Ratchet -V.A.G. 1331/1- to 6 Nm.



- Reconnect the -NEGATIVE- battery terminal clamp and tighten to 6 Nm using the Torque Wrench, 6-50Nm -V.A.G 1331A- and Torque Wrench 1331 Insert - Reversible Ratchet -V.A.G. 1331/1-.

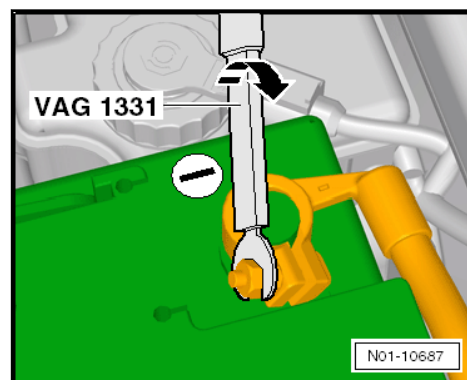


If the battery terminal clamp on the negative terminal is NOT tight:

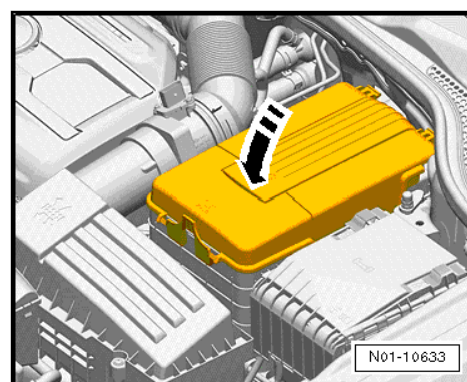
- Tighten the -NEGATIVE- battery terminal clamp on the battery terminal to 6 Nm using the Torque Wrench, 6-50Nm



-V.A.G 1331A- and Torque Wrench 1331 Insert - Reversible Ratchet -V.A.G. 1331/1-.



- Reinstall the cover, if equipped.



Note

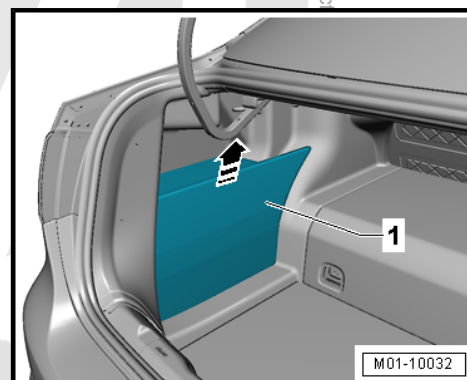
After the battery was reconnected, refer to ➤ Electrical Equipment; Rep. Gr. 27; Battery, Connecting/Steps after Connecting the Battery.

4.6.2 Luggage Compartment Battery

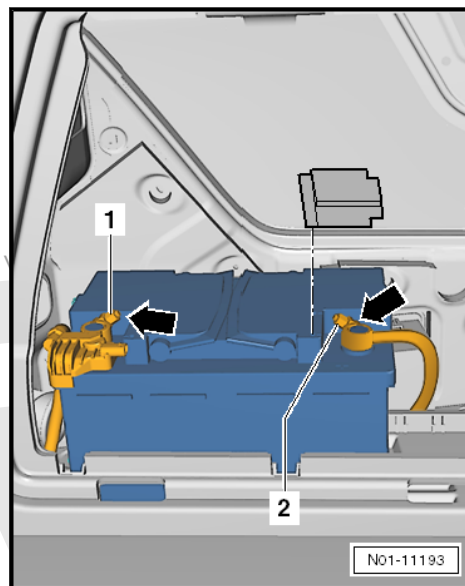
Perform the following procedure:

The 12 V battery is located in the luggage compartment on the left side.

- Remove the cover -1- in the direction of the arrow from the mount.



- Fold up the terminal covers and remove them upward if necessary.



- By moving battery negative cable -1- and battery positive cable -2- back and forth, check whether battery clamps are seated securely on battery terminals.



WARNING

If the battery clamp on the positive terminal is loose, disconnect the battery clamp on the negative terminal first to prevent an accident.

If the battery clamp on the positive terminal is not secure:

- Disconnect the battery clamp -1- from the battery negative terminal.
- Tighten the battery clamp -2- on the battery positive terminal to 6 Nm.
- Install the positive terminal cover, if necessary, and fold down again.
- Reconnect battery clamp -1- on the negative battery terminal and tighten to 6 Nm.
- Install the cover.

If the battery clamp on the negative terminal is not secure:

- Reconnect battery clamp -1- on the negative battery terminal and tighten to 6 Nm.
- Install the cover.



Note

After the battery was reconnected, refer to ➤ Electrical Equipment; Rep. Gr. 27; Battery, Connecting/Steps after Connecting the Battery.



4.7 Battery: Checking with Battery Tester -VAS 6161-

Procedure

Refer to ⇒ Electrical Equipment General Information; Rep.
Gr. 27; Battery, Checking.

Vehicle Electrical System → Electrical System General Information. Refer to ⇒ Rep. Gr. 27. → Battery, Checking.



Note

For technical reasons it is possible the links do not go to the correct chapter. If that is the case, please look up the procedure manually in the corresponding infomedia.

4.8 Battery Level, Reading - Sending Diagnostic Protocol Online



Note

Only for vehicles with start/stop system and regeneration.

Procedure

The battery level is read while the battery transport mode is being deactivated. Refer to ⇒ [T4.58 ransport Mode, Deactivating", page 284](#) .

4.9 Tires, Checking Condition, Wear Pattern, Tread Depth and Inflation Pressure

⇒ [C4.9.1 hecking Condition", page 88](#)

⇒ [C4.9.2 hecking Wear Pattern", page 88](#)

⇒ [C4.9.3 hecking Tread Depth \(Including Spare Tire\)", page 88](#)

⇒ [I4.9.4 nformation", page 89](#)

⇒ [P4.9.5 ressures for Golf Wagon from MY 2007", page 90](#)

⇒ [P4.9.6 ressures, Jetta from MY 2005 and Jetta from MY 2006", page 95](#)

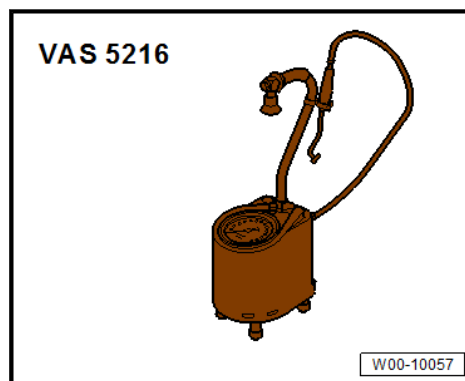
⇒ [P4.9.7 ressures, Golf Wagon from MY 2010", page 100](#)

⇒ [P4.9.8 ressures, Jetta from MY 2011", page 100](#)

Special tools and workshop equipment required



◆ Tire Inflation Device -VAS 5216-



4.9.1 Tires, Checking Condition



WARNING

If damage is discovered, the tire must be examined to determine whether a new one must be installed.

Checks during Pre-Delivery Inspection

- Check tire tread and side walls for damage, if necessary remove any foreign bodies, such as nails or screws.

Checks during inspection service

- Check tire tread and side walls for damage, if necessary remove any foreign bodies, such as nails or screws.
- Check tire treads for flattening, one-sided tread wear, porous side surfaces, cracks, cuts, and rim damage.

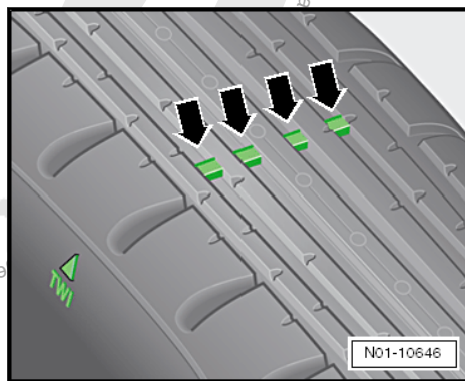
4.9.2 Tires, Checking Wear Pattern

The tread wear on the front tires will help determine whether toe or camber need to be checked.

- ◆ Feathered edges of the tire tread may indicate a faulty toe adjustment.
- ◆ One-sided tread wear is mostly caused by faulty camber.

If such wear patterns are found, determine the causes by checking the wheel alignment (repair measure).

4.9.3 Tires, Checking Tread Depth (Including Spare Tire)



- Tread Depth, Checking



Minimum tread depth: 1.6 mm



Note

- ◆ *This value may vary for individual countries due to different legal regulations. Ask the importer.*
- ◆ *The minimum tread depth is reached when no more profile is present at the 1.6 mm high tread wear indicators -arrows- positioned at intervals around the tire.*
- ◆ *Inform the customer if the tread depth is nearing the legally permitted minimum tread depth.*

4.9.4 General Information



WARNING

- ◆ ***For driving safety, all tires on the vehicle should be of the same make and tread design. Approved wheel/tire combinations. Refer to ➔ Wheel and Tire Guide; Rep. Gr. 44.***
- ◆ ***On AWD vehicles, always use tires of the same make and tread design. Otherwise, the self-locking center differential can get damaged.***



Note

- ◆ *The tire pressure table applies only for normal tires, for all factory installed tire sizes.*
- ◆ *The tire pressures for relevant model are found on a sticker. This sticker is bonded on the inside of the fuel filler door or on the B-pillar.*
- ◆ *Keep in mind that the tire pressure specifications on the sticker refer to cold tires. Do not reduce tire pressure when the tires are warm.*
- ◆ *Adjust tire pressure according to the load.*
- ◆ *If the tire pressure for the spare wheel is not listed, then fill the spare wheel with the highest tire pressure specified for the vehicle.*
- ◆ *On vehicles with tire pressure monitoring display, make sure that a basic setting is performed after each pressure adjustment. Refer to ➔ **P4.44 Pressure Monitoring System, Performing Basic Setting**, page 236 .*



Winter tires



Note

- ♦ For important information regarding recommended winter tires, refer to ➔ *Wheel and Tire Guide; Rep. Gr. 44; Recommended Winter Tires*.
- ♦ If winter tires are mounted, a sticker informing the customer of the speed limit must be affixed inside the passenger compartment so that it is clearly visible.
- ♦ On winter tires, the tire pressure must no longer be increased. But this is true only if the winter tires being used are the exact same size as the standard summer tire, and the speed index does not exceed "H". If deviating from this, then the tire manufacturer recommendations must be followed.



Note

For technical reasons it is possible the links do not go to the correct chapter. If that is the case, please look up the procedure manually in the corresponding infomedia.

4.9.5 Tire Pressures for Golf Wagon from MY 2007



Note

- ♦ Make sure the tire pressure label is there during the delivery inspection. Order a new sticker from the Electronic Parts Catalog (ETKA) if it is missing.
- ♦ The required tires pressures for the relevant model are on a sticker attached to the inside of fuel filler flap, or on the driver side B-pillar.
- ♦ If the tire pressure label is missing, do the following:
- ♦ Get the correct part number for the vehicle in the Electronic Parts Catalog (ETKA).
- ♦ Get the inflation pressure using the part number in the tire pressure tables.
- ♦ Standard pressure: If there are no tire pressures give under a part number, then one standard pressure applies for all approved tire/wheel combinations. Refer to ➔ *Wheel and Tire Guide - Standard Production; Rep. Gr. 44*.

Check the tire pressure using the Tire Inflation Device -VAS 5216- and correct if necessary.

Gasoline Engines

- 1.4L / 88, 90 kW. Refer to ➔ [page 91](#) .
- 1.4I / 103 kW. Refer to ➔ [page 91](#) .
- 1.4L / 118, 125 kW. Refer to ➔ [page 91](#) .
- 1.6L / 75 kW. Refer to ➔ [page 92](#) .
- 1.6L / 85 kW. Refer to ➔ [page 92](#) .



2.0L / 85 kW. Refer to ➤ [page 92](#) .

2.0L / 110 kW. Refer to ➤ [page 92](#) .

2.0L / 147 kW. Refer to ➤ [page 93](#) .

2.5L / 110 kW. Refer to ➤ [page 93](#) .

Diesel Engines

1.9L / 74 kW TDI. Refer to ➤ [page 93](#) .

1.9L / 77 kW TDI. Refer to ➤ [page 93](#) .

1.9L / 77 kW TDI BlueMotion. Refer to ➤ [page 94](#) .

2.0L / 100 + 103 kW TDI. Refer to ➤ [page 94](#) .

2.0L / 125 kW TDI. Refer to ➤ [page 94](#) .

1.9L / 77 kW TDI AWD. Refer to ➤ [page 94](#) .

Gasoline Engine

Displacement / output				
1.4L / 88 kW / 90 kW				
Tire size	Half load		Full load	
	Front (bar)	Rear (bar)	Front (bar)	Rear (bar)
205/55 R 16	2.0	2.0	2.3	2.8
225/45 R 17	2.0	2.0	2.3	2.8
225/40 R 18	2.0	2.0	2.3	2.8
Mini spare tire	4.2	4.2	4.2	4.2

Gasoline Engine

Displacement / output				
1.4L / 103 kW				
Tire size	Half load		Full load	
	Front (bar)	Rear (bar)	Front (bar)	Rear (bar)
205/55 R 16	2.2	2.2	2.4	2.9
225/45 R 17	2.2	2.2	2.4	2.9
225/40 R 18	2.2	2.2	2.4	2.9
Mini spare tire	4.2	4.2	4.2	4.2

Gasoline Engine

Displacement / output				
1.4L / 118, 125 kW				
Tire size	Half load		Full load	
	Front (bar)	Rear (bar)	Front (bar)	Rear (bar)
205/55 R 16	2.3	2.3	2.5	3.0
225/45 R 17	2.3	2.3	2.5	3.0
225/40 R 18	2.3	2.3	2.5	3.0
Mini spare tire	4.2	4.2	4.2	4.2



Gasoline Engine

Displacement / output				
1.6L / 75 kW				
Tire size	Half load		Full load	
	Front (bar)	Rear (bar)	Front (bar)	Rear (bar)
195/65 R 15	2.0	2.0	2.3	2.8
205/55 R 16	2.0	2.0	2.3	2.8
225/45 R 17	2.0	2.0	2.3	2.8
225/40 R 18	2.0	2.0	2.3	2.8
Mini spare tire	4.2	4.2	4.2	4.2

Gasoline Engine

Displacement / output				
1.6L / 85 kW				
Tire size	Half load		Full load	
	Front (bar)	Rear (bar)	Front (bar)	Rear (bar)
195/65 R 15	2.0	2.0	2.3	2.8
205/55 R 16	2.0	2.0	2.3	2.8
225/45 R 17	2.0	2.0	2.3	2.8
225/40 R 18	2.0	2.0	2.3	2.8
Mini spare tire	4.2	4.2	4.2	4.2

Gasoline Engine

Displacement / output				
2.0L / 85 kW				
Tire size	Half load		Full load	
	Front (bar)	Rear (bar)	Front (bar)	Rear (bar)
195/65 R 15	2.2	2.2	2.4	2.9
205/55 R 16	2.2	2.2	2.4	2.9
225/45 R 17	2.2	2.2	2.4	2.9
Mini spare tire	4.2	4.2	4.2	4.2

Gasoline Engine

Displacement / output				
2.0L / 110 kW				
Tire size	Half load		Full load	
	Front (bar)	Rear (bar)	Front (bar)	Rear (bar)
205/55 R 16	2.2	2.2	2.4	2.9
225/45 R 17	2.2	2.2	2.4	2.9
225/40 R 18	2.2	2.2	2.4	2.9
Mini spare tire	4.2	4.2	4.2	4.2



Gasoline Engine

Displacement / output				
2.0L / 147 kW				
Tire size	Half load		Full load	
	Front (bar)	Rear (bar)	Front (bar)	Rear (bar)
205/55 R 16	2.4	2.4	2.6	3.0
225/45 R 17	2.4	2.4	2.6	3.0
225/40 R 18	2.4	2.4	2.6	3.0
Mini spare tire	4.2	4.2	4.2	4.2

Gasoline Engine

Displacement / output				
2.5L / 110 kW				
Tire size	Half load		Full load	
	Front (bar / kPa / psi)	Rear (bar / kPa / psi)	Front (bar / kPa / psi)	Rear (bar / kPa / psi)
195/65 R 15	2.3 / 230 / 33	2.3 / 230 / 33	2.3 / 230 / 33	2.3 / 230 / 33
205/55 R 16	2.3 / 230 / 33	2.3 / 230 / 33	2.3 / 230 / 33	2.3 / 230 / 33
225/45 R 17	2.3 / 230 / 33	2.3 / 230 / 33	2.3 / 230 / 33	2.3 / 230 / 33
225/40 R 18	2.4	2.4	2.6	3.0
Mini spare tire	4.2	4.2	4.2	4.2

Diesel engine

Displacement / output				
1.9L / 74 kW TDI				
Tire size	Half load		Full load	
	Front (bar / kPa / psi)	Rear (bar / kPa / psi)	Front (bar / kPa / psi)	Rear (bar / kPa / psi)
195/65 R 15	2.2 / 220 / 32	2.0 / 200 / 29	2.4 / 240 / 34	2.9 / 290 / 42
205/55 R 16	2.2 / 220 / 32	2.0 / 200 / 29	2.4 / 240 / 34	2.9 / 290 / 42
225/45 R 17	2.2 / 220 / 32	2.0 / 200 / 29	2.4 / 240 / 34	2.9 / 290 / 42
Mini spare tire	4.2	4.2	4.2	4.2

Diesel engine

Displacement / output				
1.9L / 77 kW TDI				
Tire size	Half load		Full load	
	Front (bar)	Rear (bar)	Front (bar)	Rear (bar)
195/65 R 15	2.2	2.2	2.4	2.9
205/55 R 16	2.2	2.2	2.4	2.9
225/45 R 17	2.2	2.2	2.4	2.9
225/40 R 18	2.2	2.2	2.4	2.9
Mini spare tire	4.2	4.2	4.2	4.2



Diesel engine

Displacement / output				
1.9L / 77 kW TDI BlueMotion				
Tire size	Half load		Full load	
	Front (bar)	Rear (bar)	Front (bar)	Rear (bar)
195/65 R 15	2.5	2.5	2.5	2.9
205/55 R 16	2.5	2.5	2.5	2.9
Mini spare tire	4.2	4.2	4.2	4.2

Diesel engine

Displacement / output				
2.0L / 100 + 103 kW TDI				
Tire size	Half load		Full load	
	Front (bar)	Rear (bar)	Front (bar)	Rear (bar)
195/65 R 15	2.2	2.2	2.4	2.9
205/55 R 16	2.2	2.2	2.4	2.9
225/45 R 17	2.2	2.2	2.4	2.9
225/40 R 18	2.2	2.2	2.4	2.9
Mini spare tire	4.2	4.2	4.2	4.2

Diesel engine

Displacement / output				
2.0L / 125 kW TDI				
Tire size	Half load		Full load	
	Front (bar)	Rear (bar)	Front (bar)	Rear (bar)
195/65 R 15	2.4	2.4	2.6	3.0
205/55 R 16	2.4	2.4	2.6	3.0
225/45 R 17	2.4	2.4	2.6	3.0
225/40 R 18	2.4	2.4	2.6	3.0
Mini spare tire	4.2	4.2	4.2	4.2

Diesel engine

Displacement / output				
1.9L / 77kW TDI AWD				
Tire size	Half load		Full load	
	Front (bar)	Rear (bar)	Front (bar)	Rear (bar)
205/55 R 16	2.2	2.2	2.4	2.9
225/45 R 17	2.2	2.2	2.4	2.9
225/40 R 18	2.2	2.2	2.4	2.9
Mini spare tire	4.2	4.2	4.2	4.2



4.9.6 Tire Pressures, Jetta from MY 2005 and Jetta from MY 2006



Note

- ◆ *Make sure the tire pressure label is there during the delivery inspection. Order a new sticker from the Electronic Parts Catalog (ETKA) if it is missing.*
- ◆ *The required tires pressures for the relevant model are on a sticker attached to the inside of fuel filler flap, or on the driver side B-pillar.*
- ◆ *If the tire pressure label is missing, do the following:*
- ◆ *Get the correct part number for the vehicle in the Electronic Parts Catalog (ETKA).*
- ◆ *Get the inflation pressure using the part number in the tire pressure tables.*
- ◆ *Standard pressure: If there are no tire pressures give under a part number, then one standard pressure applies for all approved tire/wheel combinations. Refer to ⇒ Wheel and Tire Guide - Standard Production; Rep. Gr. 44.*

Check the tire pressure using the Tire Inflation Device -VAS 5216- and correct if necessary.

Gasoline Engines

1.4L / 88, 90 kW,
1.4L / 103 kW,
1.4L / 118, 125 kW,
1.6L / 75 kW,
1.6L / 85 kW,
2.0L / 85 kW,
2.0L / 110 kW,
2.0L / 147 kW,
2.5L / 110 kW,

Diesel Engines

1.9L / 74 kW TDI
1.9L / 77 kW TDI,
1.9L / 77 kW TDI BlueMotion,
2.0L / 100 + 103 kW TDI,
2.0L / 125 kW TDI,
1.9L / 77 kW TDI AWD,



Gasoline Engine

Displacement / output				
1.4L / 88 kW / 90 kW				
Tire size	Half load		Full load	
	Front (bar)	Rear (bar)	Front (bar)	Rear (bar)
205/55 R 16	2.0	2.0	2.3	2.8
225/45 R 17	2.0	2.0	2.3	2.8
225/40 R 18	2.0	2.0	2.3	2.8
Mini spare tire	4.2	4.2	4.2	4.2

Gasoline Engine

Displacement / output				
1.4L / 103 kW				
Tire size	Half load		Full load	
	Front (bar)	Rear (bar)	Front (bar)	Rear (bar)
205/55 R 16	2.2	2.2	2.4	2.9
225/45 R 17	2.2	2.2	2.4	2.9
225/40 R 18	2.2	2.2	2.4	2.9
Mini spare tire	4.2	4.2	4.2	4.2

Gasoline Engine

Displacement / output				
1.4L / 118, 125 kW				
Tire size	Half load		Full load	
	Front (bar)	Rear (bar)	Front (bar)	Rear (bar)
205/55 R 16	2.3	2.3	2.5	3.0
225/45 R 17	2.3	2.3	2.5	3.0
225/40 R 18	2.3	2.3	2.5	3.0
Mini spare tire	4.2	4.2	4.2	4.2

Gasoline Engine

Displacement / output				
1.6L / 75 kW				
Tire size	Half load		Full load	
	Front (bar)	Rear (bar)	Front (bar)	Rear (bar)
195/65 R 15	2.0	2.0	2.3	2.8
205/55 R 16	2.0	2.0	2.3	2.8
225/45 R 17	2.0	2.0	2.3	2.8
225/40 R 18	2.0	2.0	2.3	2.8
Mini spare tire	4.2	4.2	4.2	4.2



Gasoline Engine

Displacement / output				
1.6L / 85 kW				
Tire size	Half load		Full load	
	Front (bar)	Rear (bar)	Front (bar)	Rear (bar)
195/65 R 15	2.0	2.0	2.3	2.8
205/55 R 16	2.0	2.0	2.3	2.8
225/45 R 17	2.0	2.0	2.3	2.8
225/40 R 18	2.0	2.0	2.3	2.8
Mini spare tire	4.2	4.2	4.2	4.2

Gasoline Engine

Displacement / output				
2.0L / 85 kW				
Tire size	Half load		Full load	
	Front (bar)	Rear (bar)	Front (bar)	Rear (bar)
195/65 R 15	2.2	2.2	2.4	2.9
205/55 R 16	2.2	2.2	2.4	2.9
225/45 R 17	2.2	2.2	2.4	2.9
Mini spare tire	4.2	4.2	4.2	4.2

Gasoline Engine

Displacement / output				
2.0L / 110 kW				
Tire size	Half load		Full load	
	Front (bar)	Rear (bar)	Front (bar)	Rear (bar)
205/55 R 16	2.2	2.2	2.4	2.9
225/45 R 17	2.2	2.2	2.4	2.9
225/40 R 18	2.2	2.2	2.4	2.9
Mini spare tire	4.2	4.2	4.2	4.2

Gasoline Engine

Displacement / output				
2.0L / 147 kW				
Tire size	Half load		Full load	
	Front (bar)	Rear (bar)	Front (bar)	Rear (bar)
205/55 R 16	2.4	2.4	2.6	3.0
225/45 R 17	2.4	2.4	2.6	3.0
225/40 R 18	2.4	2.4	2.6	3.0
Mini spare tire	4.2	4.2	4.2	4.2



Gasoline Engine

Displacement / output				
2.5L / 110 kW				
Tire size	Half load		Full load	
	Front	Rear	Front	Rear
	(bar / kPa / psi)	(bar / kPa / psi)	(bar / kPa / psi)	(bar / kPa / psi)
195/65 R 15	2.3 / 230 / 33	2.3 / 230 / 33	2.3 / 230 / 33	2.3 / 230 / 33
205/55 R 16	2.3 / 230 / 33	2.3 / 230 / 33	2.3 / 230 / 33	2.3 / 230 / 33
225/45 R 17	2.3 / 230 / 33	2.3 / 230 / 33	2.3 / 230 / 33	2.3 / 230 / 33
225/40 R 18	2.4	2.4	2.6	3.0
Mini spare tire	4.2	4.2	4.2	4.2

Diesel engine

Displacement / output				
1.9L / 74 kW TDI				
Tire size	Half load		Full load	
	Front	Rear	Front	Rear
	(bar / kPa / psi)	(bar / kPa / psi)	(bar / kPa / psi)	(bar / kPa / psi)
195/65 R 15	2.2 / 220 / 32	2.0 / 200 / 29	2.4 / 240 / 34	2.9 / 290 / 42
205/55 R 16	2.2 / 220 / 32	2.0 / 200 / 29	2.4 / 240 / 34	2.9 / 290 / 42
225/45 R 17	2.2 / 220 / 32	2.0 / 200 / 29	2.4 / 240 / 34	2.9 / 290 / 42
Mini spare tire	4.2	4.2	4.2	4.2

Diesel engine

Displacement / output				
1.9L / 77 kW TDI				
Tire size	Half load		Full load	
	Front (bar)	Rear (bar)	Front (bar)	Rear (bar)
195/65 R 15	2.2	2.2	2.4	2.9
205/55 R 16	2.2	2.2	2.4	2.9
225/45 R 17	2.2	2.2	2.4	2.9
225/40 R 18	2.2	2.2	2.4	2.9
Mini spare tire	4.2	4.2	4.2	4.2

Diesel engine

Displacement / output				
1.9L/77 kW TDI BlueMotion				
Tire size	Half load		Full load	
	Front (bar)	Rear (bar)	Front (bar)	Rear (bar)
195/65 R 15	2.5	2.5	2.5	2.9
205/55 R 16	2.5	2.5	2.5	2.9
Mini spare tire	4.2	4.2	4.2	4.2



Diesel engine

Displacement / output				
2.0L / 100 + 103 kW TDI				
Tire size	Half load		Full load	
	Front (bar)	Rear (bar)	Front (bar)	Rear (bar)
195/65 R 15	2.2	2.2	2.4	2.9
205/55 R 16	2.2	2.2	2.4	2.9
225/45 R 17	2.2	2.2	2.4	2.9
225/40 R 18	2.2	2.2	2.4	2.9
Mini spare tire	4.2	4.2	4.2	4.2

Diesel engine

Displacement / output				
2.0L / 125 kW TDI				
Tire size	Half load		Full load	
	Front (bar)	Rear (bar)	Front (bar)	Rear (bar)
195/65 R 15	2.4	2.4	2.6	3.0
205/55 R 16	2.4	2.4	2.6	3.0
225/45 R 17	2.4	2.4	2.6	3.0
225/40 R 18	2.4	2.4	2.6	3.0
Mini spare tire	4.2	4.2	4.2	4.2

Diesel engine

Displacement / output				
1.9L / 77kW TDI AWD				
Tire size	Half load		Full load	
	Front (bar)	Rear (bar)	Front (bar)	Rear (bar)
205/55 R 16	2.2	2.2	2.4	2.9
225/45 R 17	2.2	2.2	2.4	2.9
225/40 R 18	2.2	2.2	2.4	2.9
Mini spare tire	4.2	4.2	4.2	4.2



4.9.7 Tire Pressures, Golf Wagon from MY 2010



Note

- ♦ Make sure the tire pressure label is there during the delivery inspection. Order a new sticker from the Electronic Parts Catalog (ETKA) if it is missing.
- ♦ The required tires pressures for the relevant model are on a sticker attached to the inside of fuel filler flap, or on the driver side B-pillar.
- ♦ If the tire pressure label is missing, do the following:
- ♦ Get the correct part number for the vehicle in the Electronic Parts Catalog (ETKA).
- ♦ Get the tire pressure from the tire pressure label. Refer to ²⁴⁾.
- ♦ Standard pressure: If there are no tire pressures give under a part number, then one standard pressure applies for all approved tire/wheel combinations. Refer to ➤ Wheel and Tire Guide - Standard Production; Rep. Gr. 44.

Check the tire pressure using the Tire Inflation Device -VAS 5216- and correct if necessary.

24) Information not available at the time of printing.

4.9.8 Tire Pressures, Jetta from MY 2011



Note

- ♦ Make sure the tire pressure label is there during the delivery inspection. Order a new sticker from the Electronic Parts Catalog (ETKA) if it is missing.
- ♦ The required tires pressures for the relevant model are on a sticker attached to the inside of fuel filler flap, or on the driver side B-pillar.
- ♦ If the tire pressure label is missing, do the following:
- ♦ Get the correct part number for the vehicle in the Electronic Parts Catalog (ETKA).
- ♦ Get the inflation pressure using the part number in the tire pressure tables.
- ♦ Standard pressure: If there are no tire pressures give under a part number, then one standard pressure applies for all approved tire/wheel combinations. Refer to ➤ Wheel and Tire Guide - Standard Production; Rep. Gr. 44.

Check the tire pressure using the Tire Inflation Device -VAS 5216- and correct if necessary.

Part Number -5C0 010 695 C-		Jetta from MY 2011		
Tire size	Half load kPa/bar/psi		Full load kPa/bar/psi	
	Front	Rear	Front	Rear
all ¹⁾	200/2.0/29	200/2.0/29	230/2.3/33	280/2.8/41



1) Applies to all approved wheel/tire combinations. Refer to
⇒ Wheel and Tire Guide; Rep. Gr. 44; Wheel and Tire Combinations.

Part Number -5C0 010 748 R-		Jetta from MY 2011		
	Half load kPa/bar/psi		Full load kPa/bar/psi	
Tire size	Front	Rear	Front	Rear
all ¹⁾	230/2.3/33	230/2.3/33	230/2.3/33	280/2.8/41

1) Applies to all approved wheel/tire combinations. Refer to
⇒ Wheel and Tire Guide; Rep. Gr. 44; Wheel and Tire Combinations.

Part Number -5C0 010 755 G-		Jetta from MY 2011		
	Half load kPa/bar/psi		Full load kPa/bar/psi	
Tire size	Front	Rear	Front	Rear
all ¹⁾	210/2.1/30	210/2.1/30	230/2.3/33	280/2.8/41

1) Applies to all approved wheel/tire combinations. Refer to
⇒ Wheel and Tire Guide; Rep. Gr. 44; Wheel and Tire Combinations.

Part Number -5C0 010 695-		Jetta from MY 2011		
	Half load kPa/bar/psi		Full load kPa/bar/psi	
Tire size	Front	Rear	Front	Rear
all ¹⁾	220/2.2/32	220/2.2/32	240/2.4/35	290/2.9/42

1) Applies to all approved wheel/tire combinations. Refer to
⇒ Wheel and Tire Guide; Rep. Gr. 44; Wheel and Tire Combinations.

Part Number -5C0 010 823 D-		Jetta from MY 2011		
	Half load kPa/bar/psi		Full load kPa/bar/psi	
Tire size	Front	Rear	Front	Rear
all ¹⁾	220/2.2/32	220/2.2/32	250/2.5/36	300/3.0/44

1) Applies to all approved wheel/tire combinations. Refer to
⇒ Wheel and Tire Guide; Rep. Gr. 44; Wheel and Tire Combinations.

Part Number -5C0 010 695 K-		Jetta from MY 2011		
	Half load kPa/bar/psi		Full load kPa/bar/psi	
Tire size	Front	Rear	Front	Rear
all ¹⁾	250/2.5/36	250/2.5/36	270/2.7/39	300/3.0/44



1) Applies to all approved wheel/tire combinations. Refer to
⇒ Wheel and Tire Guide; Rep. Gr. 44; Wheel and Tire Combinations.

Part Number -5C0 010 694 R-		Jetta from MY 2011		
	Half load kPa/bar/psi		Full load kPa/bar/psi	
Tire size	Front	Rear	Front	Rear
all ¹⁾	220/2.2/32	220/2.2/32	240/2.4/35	290/2.9/42

1) Applies to all approved wheel/tire combinations. Refer to
⇒ Wheel and Tire Guide; Rep. Gr. 44; Wheel and Tire Combinations.

Part Number -5C0 010 748 S-		Jetta from MY 2011		
	Half load kPa/bar/psi		Full load kPa/bar/psi	
Tire size	Front	Rear	Front	Rear
all ¹⁾	250/2.5/36	250/2.5/36	250/2.5/36	290/2.9/42

1) Applies to all approved wheel/tire combinations. Refer to
⇒ Wheel and Tire Guide; Rep. Gr. 44; Wheel and Tire Combinations.

Part Number -5C0 010 649 R-		Jetta from MY 2011		
	Half load kPa/bar/psi		Full load kPa/bar/psi	
Tire size	Front	Rear	Front	Rear
all ¹⁾	220/2.2/32	220/2.2/32	240/2.4/35	290/2.9/42

1) Applies to all approved wheel/tire combinations. Refer to
⇒ Wheel and Tire Guide; Rep. Gr. 44; Wheel and Tire Combinations.

Part Number -5C0 010 695 D-		Jetta from MY 2011		
	Half load kPa/bar/psi		Full load kPa/bar/psi	
Tire size	Front	Rear	Front	Rear
all ¹⁾	230/2.3/33	230/2.3/33	250/2.5/36	300/3.0/44

1) Applies to all approved wheel/tire combinations. Refer to
⇒ Wheel and Tire Guide; Rep. Gr. 44; Wheel and Tire Combinations.

Part Number -5C0 010 830 Q-		Jetta from MY 2011		
	Half load kPa/bar/psi		Full load kPa/bar/psi	
Tire size	Front	Rear	Front	Rear
all ¹⁾	250/2.5/36	250/2.5/36	260/2.6/38	300/3.0/44



1) Applies to all approved wheel/tire combinations. Refer to
⇒ Wheel and Tire Guide; Rep. Gr. 44; Wheel and Tire Combinations.

Part Number -5C0 010 830 R-		Jetta from MY 2011		
		Half load kPa/bar/psi		Full load kPa/bar/psi
Tire size	Front	Rear	Front	Rear
all ¹⁾	240/2.4/35	240/2.4/35	260/2.6/38	300/3.0/44

1) Applies to all approved wheel/tire combinations. Refer to
⇒ Wheel and Tire Guide; Rep. Gr. 44; Wheel and Tire Combinations.

Part Number -5C0 010 775 G-		Jetta from MY 2011		
		Half load kPa/bar/psi		Full load kPa/bar/psi
Tire size	Front	Rear	Front	Rear
all ¹⁾	210/2.1/30	210/2.1/30	230/2.3/33	280/2.8/41

1) Applies to all approved wheel/tire combinations. Refer to
⇒ Wheel and Tire Guide; Rep. Gr. 44; Wheel and Tire Combinations.

Part Number -5C0 010 779 Q-		Jetta from MY 2011		
		Half load bar/psi		Full load bar/psi
Tire size	Front	Rear	Front	Rear
all ¹⁾	2.4/35	2.4/35	2.6/38	3.0/44

1) Applies to all approved wheel/tire combinations. Refer to
⇒ Wheel and Tire Guide; Rep. Gr. 44; Wheel and Tire Combinations.

Part Number -5C0 010 792 A-		Jetta from MY 2011		
		Half load kPa/bar		Full load kPa/bar
Tire size	Front	Rear	Front	Rear
205/55 R16 91V/W	220/2.2	220/2.2	240/2.4	290/2.9
225/45 R17 91W				
255/40 R18 92Y				

Part Number -5C0 010 792 B-		Jetta from MY 2011		
		Half load kPa/bar		Full load kPa/bar
Tire size	Front	Rear	Front	Rear
205/55 R16 91V/W	250/2.5	250/2.5	270/2.7	300/3.0
225/45 R17 91W				



Part Number -5C0 010 792 B-		Jetta from MY 2011		
	Half load kPa/bar		Full load kPa/bar	
Tire size	Front	Rear	Front	Rear
255/40 R18 92Y				

Part Number -5C0 010 792-		Jetta from MY 2011		
	Half load kPa/bar		Full load kPa/bar	
Tire size	Front	Rear	Front	Rear
205/55 R16 91V/W	230/2.3	230/2.3	250/2.5	300/3.0
225/45 R17 91W				
255/40 R18 92Y				

Part Number -5C0 010 823 E-		Jetta from MY 2011		
	Half load kPa/bar		Full load kPa/bar	
Tire size	Front	Rear	Front	Rear
205/55 R16 91V/W	220/2.2	220/2.2	240/2.4	290/2.9
225/45 R17 91W				
255/40 R18 92Y				

Part Number -5C0 010 838 S-		Jetta from MY 2011		
	Half load kPa/bar		Full load kPa/bar	
Tire size	Front	Rear	Front	Rear
205/55 R16 91V/W	220/2.2	220/2.2	240/2.4	290/2.9
225/45 R17 91W				
225/40 R18 92Y				

Part Number -5C0 010 838 T-		Jetta from MY 2011		
	Half load kPa/bar		Full load kPa/bar	
Tire size	Front	Rear	Front	Rear
205/55 R16 91V/W	250/2.5	250/2.5	270/2.7	300/3.0
225/45 R17 91W				
225/40 R18 92Y				

Part Number -5C0 010 839-		Jetta from MY 2011		
	Half load kPa/bar		Full load kPa/bar	
Tire size	Front	Rear	Front	Rear
205/55 R16 91V/W	230/2.3	230/2.3	250/2.5	300/3.0
225/45 R17 91W				



Part Number -5C0 010 839-		Jetta from MY 2011		
	Half load kPa/bar		Full load kPa/bar	
Tire size	Front	Rear	Front	Rear
225/40 R18 92Y				

Part Number -5C0 010 830 T-		Jetta from MY 2011		
	Half load kPa/bar		Full load kPa/bar	
Tire size	Front	Rear	Front	Rear
205/50 R17 93V XL	240/2.4	240/2.4	260/2.6	300/3.0

Part Number -5C0 010 830 S-		Jetta from MY 2011		
	Half load kPa/bar		Full load kPa/bar	
Tire size	Front	Rear	Front	Rear
205/50 R17 93V XL	250/2.5	250/2.5	260/2.6	300/3.0

Part Number -5C0 010 819 E-		Jetta from MY 2011		
	Half load bar		Full load bar	
Tire size	Front	Rear	Front	Rear
all ¹⁾	2.0	2.0	2.3	2.8

¹⁾ Applies to all approved wheel/tire combinations. Refer to
⇒ Wheel and Tire Guide; Rep. Gr. 44; Wheel and Tire Combi-
nations.

Part Number -5C0 010 819 Q-		Jetta from MY 2011		
	Half load bar		Full load bar	
Tire size	Front	Rear	Front	Rear
all ¹⁾	2.3	2.3	2.3	2.8

¹⁾ Applies to all approved wheel/tire combinations. Refer to
⇒ Wheel and Tire Guide; Rep. Gr. 44; Wheel and Tire Combi-
nations.

Part Number -5C0 010 819-		Jetta from MY 2011		
	Half load bar		Full load bar	
Tire size	Front	Rear	Front	Rear
all ¹⁾	2.1	2.1	2.3	2.8

¹⁾ Applies to all approved wheel/tire combinations. Refer to
⇒ Wheel and Tire Guide; Rep. Gr. 44; Wheel and Tire Combi-
nations.



Part Number -5C0 010 819 B-		Jetta from MY 2011		
	Half load bar		Full load bar	
Tire size	Front	Rear	Front	Rear
all ¹⁾	2.2	2.2	2.5	3.0

¹⁾ Applies to all approved wheel/tire combinations. Refer to
⇒ Wheel and Tire Guide; Rep. Gr. 44; Wheel and Tire Combinations.

Part Number -5C0 010 819 A-		Jetta from MY 2011		
	Half load bar		Full load bar	
Tire size	Front	Rear	Front	Rear
all ¹⁾	2.3	2.3	2.5	3.0

¹⁾ Applies to all approved wheel/tire combinations. Refer to
⇒ Wheel and Tire Guide; Rep. Gr. 44; Wheel and Tire Combinations.

Part Number -5C0 010 819 C-		Jetta from MY 2011		
	Half load bar		Full load bar	
Tire size	Front	Rear	Front	Rear
all ¹⁾	2.2	2.2	2.4	2.9

¹⁾ Applies to all approved wheel/tire combinations. Refer to
⇒ Wheel and Tire Guide; Rep. Gr. 44; Wheel and Tire Combinations.

Part Number -5C0 010 819 D-		Jetta from MY 2011		
	Half load bar		Full load bar	
Tire size	Front	Rear	Front	Rear
all ¹⁾	2.5	2.5	2.5	2.9

¹⁾ Applies to all approved wheel/tire combinations. Refer to
⇒ Wheel and Tire Guide; Rep. Gr. 44; Wheel and Tire Combinations.

Part Number -5C0 010 819 R-		Jetta from MY 2011		
	Half load bar		Full load bar	
Tire size	Front	Rear	Front	Rear
all ¹⁾	2.5	2.5	2.7	3.0

¹⁾ Applies to all approved wheel/tire combinations. Refer to
⇒ Wheel and Tire Guide; Rep. Gr. 44; Wheel and Tire Combinations.



Part Number -5C0 010 795 Q-		Jetta from MY 2011	
	Half load bar	Full load bar	
Tire size	Front	Rear	Rear
all ¹⁾			

¹⁾ Applies to all approved wheel/tire combinations. Refer to
⇒ Wheel and Tire Guide; Rep. Gr. 44; Wheel and Tire Combinations.

Part Number -5C0 010 831 J-		Jetta from MY 2011	
	Half load bar	Full load bar	
Tire size	Front	Rear	Rear
all ¹⁾	2.4	2.4	3.0

¹⁾ Applies to all approved wheel/tire combinations. Refer to
⇒ Wheel and Tire Guide; Rep. Gr. 44; Wheel and Tire Combinations.

Part Number -5C0 010 831 H-		Jetta from MY 2011	
	Half load bar	Full load bar	
Tire size	Front	Rear	Rear
all ¹⁾	2.5	2.5	3.0

¹⁾ Applies to all approved wheel/tire combinations. Refer to
⇒ Wheel and Tire Guide; Rep. Gr. 44; Wheel and Tire Combinations.

Part Number -5C0 010 782 J-		Jetta from MY 2011	
	Half load kPa/psi	Full load kPa/psi	
Tire size	Front	Rear	Rear
195/65 R15	200/29	200/29	200/29
195/65 R15 ¹⁾	200/29		
205/55 R16 ¹⁾			

¹⁾ Spare tire

Part Number -5C0 010 782 K-		Jetta from MY 2011	
	Half load kPa/psi	Full load kPa/psi	
Tire size	Front	Rear	Rear
205/55 R16	200/29	200/29	200/29
195/65 R15 ¹⁾	200/29		
205/55 R16 ¹⁾			



1) Spare tire

Part Number -5C0 010 782 L-		Jetta from MY 2011		
	Half load kPa/psi		Full load kPa/psi	
Tire size	Front	Rear	Front	Rear
205/55 R16	220/32	220/32	220/32	220/32
195/65 R15 ¹⁾	220/32			
205/55 R16 ¹⁾				

1) Spare tire

Part Number -5C0 010 782 M-		Jetta from MY 2011		
	Half load kPa/psi		Full load kPa/psi	
Tire size	Front	Rear	Front	Rear
225/45 R17	220/32	220/32	220/32	220/32
195/65 R15 ¹⁾	220/32			
205/55 R16 ¹⁾				

1) Spare tire

Part Number -5C0 010 645 M-		Jetta from MY 2011		
	Half load kPa/psi		Full load kPa/psi	
Tire size	Front	Rear	Front	Rear
205/55 R16	230/33	230/33	230/33	230/33
195/65 R15 ¹⁾	230/33			
205/55 R16 ¹⁾				

1) Spare tire

Part Number -5C0 010 694 S-		Jetta from MY 2011		
	Half load kPa/psi		Full load kPa/psi	
Tire size	Front	Rear	Front	Rear
225/45 R17	230/33	230/33	230/33	230/33
195/65 R15 ¹⁾	230/33			
205/55 R16 ¹⁾				

1) Spare tire



Part Number -5C0 010 695 A-		Jetta from MY 2011		
	Half load kPa/psi		Full load kPa/psi	
Tire size	Front	Rear	Front	Rear
225/45 R17	240/35	240/35	240/35	240/35
205/55 R16 ¹⁾	240/35			

¹⁾ Spare tire

Part Number -5C0 010 695 G-		Jetta from MY 2011		
	Half load kPa/psi		Full load kPa/psi	
Tire size	Front	Rear	Front	Rear
225/45 R18	270/39	270/39	270/39	270/39
205/55 R16 ¹⁾	270/39			

¹⁾ Spare tire

Part Number -5C0 010 784 D-		Jetta from MY 2011		
	Half load kPa/psi		Full load kPa/psi	
Tire size	Front	Rear	Front	Rear
195/65 R15	280/41	280/41	280/41	280/41
125/90 R16 ¹⁾	420/60			

¹⁾ Emergency spare wheel

Part Number -5C0 010 844 H-		Jetta from MY 2011		
	Half load kPa/psi		Full load kPa/psi	
Tire size	Front	Rear	Front	Rear
205/55 R16	280/41	280/41	280/41	280/41
125/90 R16 ¹⁾	420/60			

¹⁾ Emergency spare wheel

Part Number -5C0 010 784 E-		Jetta from MY 2011		
	Half load kPa/psi		Full load kPa/psi	
Tire size	Front	Rear	Front	Rear
205/50 R17	280/41	280/41	280/41	280/41
125/90 R16 ¹⁾	420/60			

¹⁾ Emergency spare wheel



4.10 Brake and Clutch System, Changing Brake Fluid

⇒ [I4.10.1 Information and Safety Precautions", page 110](#)

⇒ [F4.10.2 Fluid Specifications", page 110](#)

⇒ [F4.10.3 Fluid, Changing", page 110](#)

4.10.1 Application Information and Safety Precautions



Note

- ◆ A new brake fluid had been used since MY 2006.
- ◆ The new brake fluid can also be used in older vehicles.
- ◆ New brake fluid can be mixed with previous brake fluid.



WARNING

- ◆ **Brake fluid must never come into contact with fluids containing mineral oils (oil, gas, cleaning solutions). Oils containing minerals damage seals and boots on brake systems.**
- ◆ **Brake fluid is poisonous. Do not let brake fluid come in contact with the paint due to its corrosive effects.**
- ◆ **Brake fluid is hygroscopic, which means that it absorbs moisture from the air. Always store brake fluid in air-tight containers.**
- ◆ **Wash off any spilled brake fluid with plenty of water.**
- ◆ **Do not reuse used / extracted brake fluid!**
- ◆ **Follow all disposal regulations.**

4.10.2 Brake Fluid Specifications

Permitted specifications of the brake fluid:

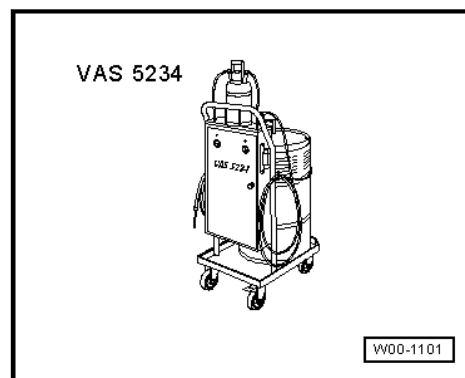
- ◆ Brake fluid corresponding to US standard FMVSS 116 DOT 4 (previous brake fluid).
- ◆ Brake fluid corresponding to VW standard, VW 501 14 (new brake fluid).

4.10.3 Brake Fluid, Changing

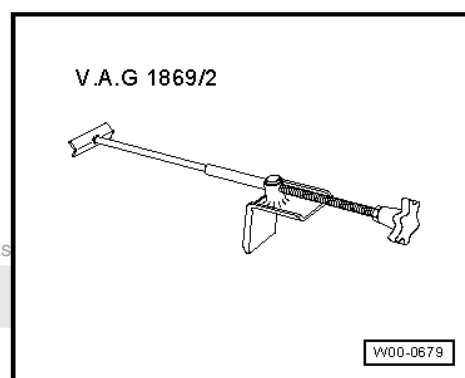
Special tools and workshop equipment required



◆ Brake Filling and Bleeding Equipment -VAS 6860-



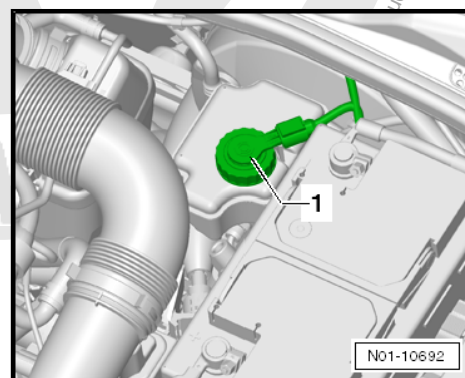
◆ Brake Pedal Actuator -V.A.G 1869/2-



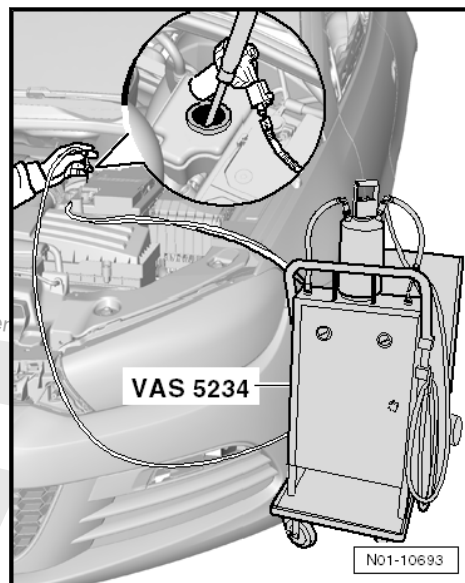
◆ Wrench - Brake Bleeder Set -VAS 5519-



- Remove the cap -1- from the brake fluid reservoir.



- Use the suction hose from the Brake Filling and Bleeding Equipment -VAS 6860- to extract as much brake fluid as possible.



Note

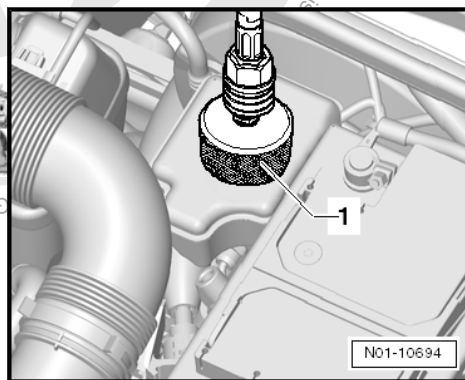
Do not remove the screen inside the brake fluid reservoir.



WARNING

Do not use extracted brake fluid again!

- Attach the adapter -1- to the brake fluid reservoir.



Pay attention to the ⇒ Operating Instructions for Brake Filling and Bleeding Equipment -VAS 6860-.

- Set the correct pressure using a Brake Charger/Bleeding Unit -VAS 5234-. Refer to Suspension, Brake Systems ⇒ Suspension, Brake Systems; Rep. Gr. 47; Brake System, Bleeding → Brake System, Bleeding.
- Attach the hose on the Brake Filling and Bleeding Equipment -VAS 6860- to the adapter -1-.

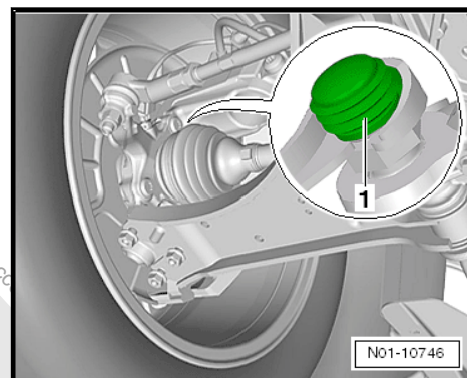


Note

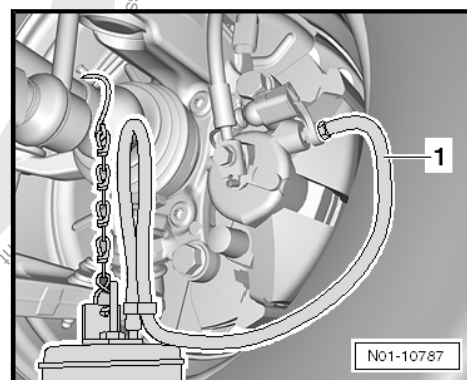
Use a suitable bleeder hose. It must seat tightly on the bleeder valve so that no air can get into the brake system.



- Remove the cap -1- from the breather valve on the left front brake caliper.



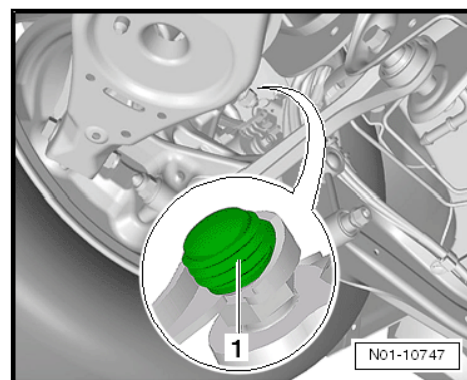
- Attach the corresponding Wrench - Brake Bleeder Set -VAS 5519-.
- Connect the collector bottle breather hose -1- to left front bleeder valve. Then open the bleeder valve and allow the corresponding quantity to flow out (see table). Close the bleeder valve. Tightening specification: Suspension → Brake Systems. Refer to ⇒ Rep. Gr. 47 → Front Brake Caliper, Servicing.



- Install the cap on the left front brake caliper bleeder valve.

Repeat the same procedure on the right front side of the vehicle.

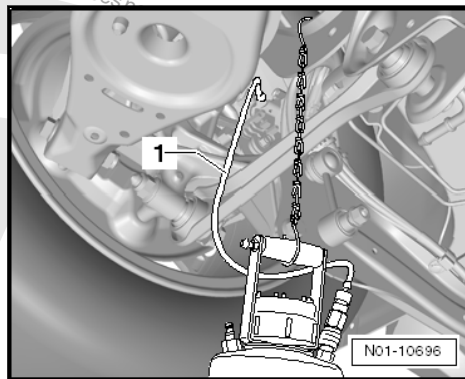
- If necessary, remove both wheels from the rear axle in order to access the bleeder valve.
- Remove the cap -1- on the left rear brake caliper breather valve.



- Attach the corresponding Wrench - Brake Bleeder Set -VAS 5519-.



- Connect the collector bottle breather hose -1- to the left rear bleeder valve.



- Open the bleeder valve and let the corresponding brake fluid capacity (see table) flow out. Close the bleeder valve. Tightening specification: Suspension → Brake Systems. Refer to ⇒ Rep. Gr. 47 → Rear Brake Caliper, Servicing.
- Install the cap on the left rear brake caliper bleed valve.
- Repeat the same procedure on the right rear side of the vehicle.

For manual transmission vehicles

Remove the air filter housing.

Procedure:

- Engine. Refer to ⇒ Rep. Gr. 23 → Diesel Direct Fuel Injection System → Overview - Air Filter

or

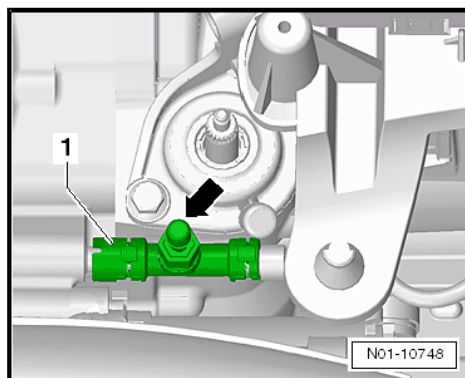
- Engine. Refer to ⇒ Rep. Gr. 24 → Injection System → Air Filter, Removing and Installing.



Note

For technical reasons it is possible the links do not go to the correct chapter. If that is the case, please look up the procedure manually in the corresponding infomedia.

- Attach the bleeder hose to the bleeder valve -arrow- of the clutch slave cylinder -1-.



- Open the valve and drain approximately 100 ml brake fluid.
- Close the valve and press the clutch pedal quickly 10 to 15 times.



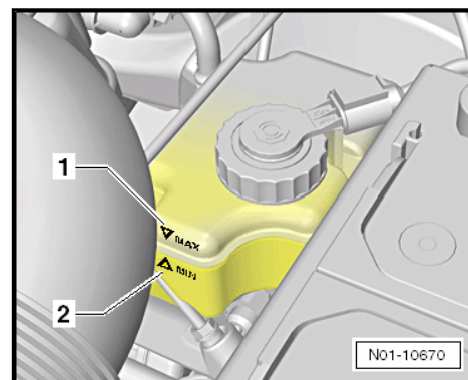
- Open the valve again and drain approximately 50 ml brake fluid.
- Close the valve, remove the bleed hose and press the clutch pedal several times.
- Install the air filter housing in reverse order of removal.

Sequence/brake fluid quantity

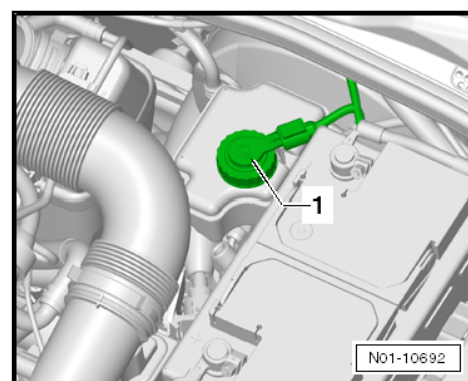
Bleeder valve sequence:	Brake fluid amount that must flow out of the bleeder valves:
Brake caliper	
Left front	0.20 liter
Right front	0.20 liter
Brake cylinder/brake caliper	
Left rear	0.30 liter
Right rear	0.30 liter
Clutch slave cylinder	0.15 liter

Total quantity: approximately 1.15 liters

- Move the lever on the Brake Filling and Bleeding Equipment -VAS 6860- to position "B" (see operating instructions).
- Remove the filler hose from the adapter.
- Remove the adapter from the brake fluid reservoir.
- Check the brake fluid level and fill if necessary. It must be between -1- and -2-.



- Install the brake fluid reservoir cap -1-.



- Install the rear wheels, if necessary. Refer to [⇒ B4.41 olts, Tightening to Specification](#), page 225.



- Perform a function test during the test drive.

4.11 Brake System and Shock Absorbers, Visually Inspecting for Leaks and Damage

Check the following components for leaks and damage:

- ◆ Brake master cylinder
- ◆ Brake booster (with ABS: hydraulic unit)
- ◆ Brake pressure regulator
- ◆ Brake caliper
- ◆ Shock absorber (only during inspection)
- ◆ Dust caps on the brake fluid bleeder valves (must be present)
- Make sure the brake hoses are not twisted.
- Make sure that no brake hose must touch any vehicle components at the maximum steering angle.
- Check the brake hoses for porosity and cracks.
- Check the brake hoses and lines for rubbing.
- Check the brake line connections and fasteners for leaks and corrosion and for proper seating.



WARNING

Correct any malfunctions (repair procedure).

4.12 Brake Fluid Level, Checking

⇒ [F4.12.1 Fluid Level, Checking Procedure](#), page 116

Brake Fluid Level at Pre-Delivery Inspection:

Brake Fluid Level at Inspection Service:



WARNING

If brake fluid level is below MIN mark -2-, check brake system (repair procedure), before adding brake fluid.

Notes on application and safety. Refer to ⇒ [I4.10.1 Information and Safety Precautions](#), page 110 .

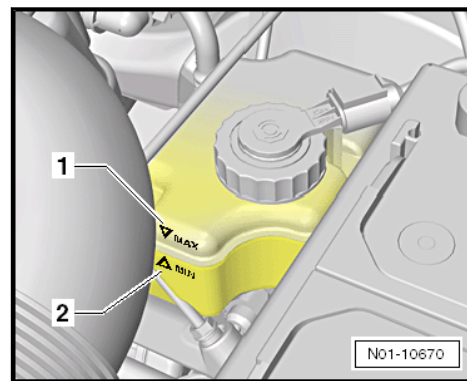
Brake fluid specification. Refer to ⇒ [F4.10.2 Fluid Specifications](#), page 110 .

Brake fluid level: check. Refer to ⇒ [F4.12.1 Fluid Level, Checking Procedure](#), page 116 .

4.12.1 Brake Fluid Level, Checking Procedure

Brake Fluid Level at Pre-Delivery Inspection:

For the delivery inspection the fluid level must lie at the MAX mark -1-.



Note

To prevent the brake fluid from overflowing from the reservoir, the level must not be over the MAX mark.

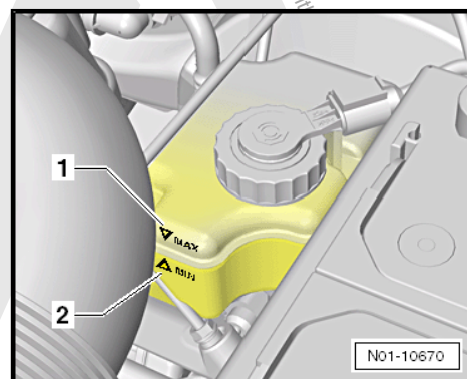
Brake Fluid Level at Inspection Service:

Brake fluid level must always be evaluated depending on brake pad wear.

During operation of the vehicle, the brakes are automatically readjusted depending on wear of the brake pads. Because of the adjustment, brake fluid level will be slightly lower as a result.

- Recommended brake fluid level when brake pad wear limit is nearly reached:

“At MIN-marking and slightly above it”, “NO FILLING REQUIRED”.



- Recommended brake fluid level when brake pads are new or are far removed from the brake pad wear limit:

“Between the MIN and MAX marks”.



WARNING

If brake fluid level is below MIN mark, check brake system “repair procedure”, before adding brake fluid.



4.13 6-Speed DSG Transmission 02E, Changing Transmission Fluid and Filter

Procedure

Drivetrain → 6-Speed DSG transmission 02E. Refer to ⇒ Rep.
Gr. 34 → Changing Transmission Fluid and Filter, Checking
Transmission Fluid Level.



Note

For technical reasons it is possible the links do not go to the correct chapter. If that is the case, please look up the procedure manually in the corresponding infomedia.

4.14 Front and Rear Brake Pad Thickness and Brake Rotor Condition, Checking

⇒ [D4.14.1 isc Brake Pads", page 118](#)

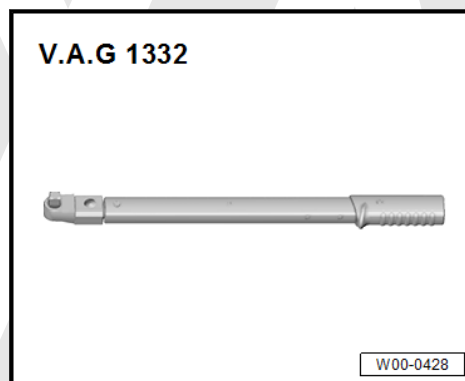
⇒ [D4.14.2 isc Brake Pads", page 119](#)

⇒ [P4.14.3 ad Thickness, Checking, Rear Drum Brake", page 120](#)

⇒ [R4.14.4 otors, Checking Condition", page 122](#)

Special tools and workshop equipment required

- ◆ Torque Wrench 1332 40-200Nm V.A.G 1332-



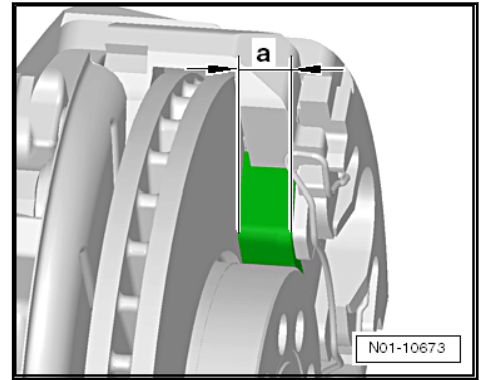
- ◆ Flashlight and mirror

Perform the following procedure:

The adapter to loosen/tighten the anti-theft wheel bolts is located in the vehicle tool kit. Refer to ⇒ [B4.41 olts, Tightening to Specification", page 225](#) .

4.14.1 Front Disc Brake Pads

- Use a mirror to determine the brake pad thickness. If necessary, remove the wheel where the brake pad wear indicator is installed.
- Pull off wheel bolt covers, if necessary. Refer to ⇒ [B4.41 olts, Tightening to Specification", page 225](#) .
- Mark the position of the wheel to the brake rotor.
- Remove the wheel bolts and then the wheel.
- Measure the thickness of the outer and inner brake pad.



a - Pad Thickness "Without" Backing Plate

Wear specification: 2 mm

With a pad thickness (without backing plate) of 2 mm, the brake pads have reached their wear limit and must be replaced (repair procedure). Inform the customer!



Note

When replacing the disc brake pads, it is absolutely necessary to check brake rotors for wear! Checking and replacing the brake pads, if necessary, is a repair procedure.

- Check the brake rotor for wear:

Procedure

Chassis → Brake Systems. Refer to ➤ Rep. Gr. 46 → Brakes, Mechanical System → Front Brakes, Servicing.



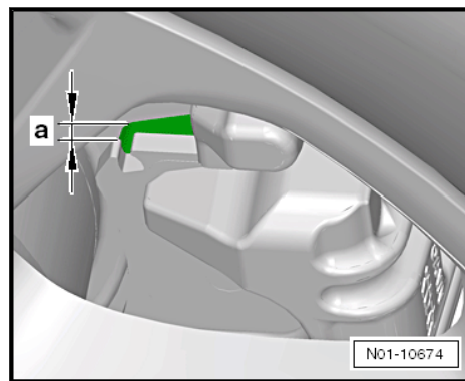
Note

For technical reasons it is possible the links do not go to the correct chapter. If that is the case, please look up the procedure manually in the corresponding infomedia.

- Install the wheel in the marked position.
- Tighten the wheel bolts diagonally. For the correct tightening specification, refer to [⇒ B4.41 olts, Tightening to Specification](#), page 225.
- After the procedures have been completed, return the adapter to the vehicle tool kit.
- If necessary, install wheel bolt caps.

4.14.2 Rear Disc Brake Pads

- Shine a flashlight through an opening in the wheel rim.
- Check the thickness of outer pad visually.



- Shine a flashlight on the inner pad and hold up a mirror.
- Check thickness of inner pad visually.

a - Inner and Outer Pad Thickness without Backing Plate

Wear specification: 2 mm

With a pad thickness (without backing plate) of 2 mm, the brake pads have reached their wear limit and must be replaced (repair procedure). Inform the customer!



Note

When replacing the disc brake pads, it is absolutely necessary to check brake rotors for wear! Checking and replacing the brake pads, if necessary, is a repair procedure.

- Check the brake rotor for wear:

Procedure

Chassis → Brake Systems. Refer to ➤ Rep. Gr. 46 → Brakes, Mechanical System → Rear Brakes, Servicing.

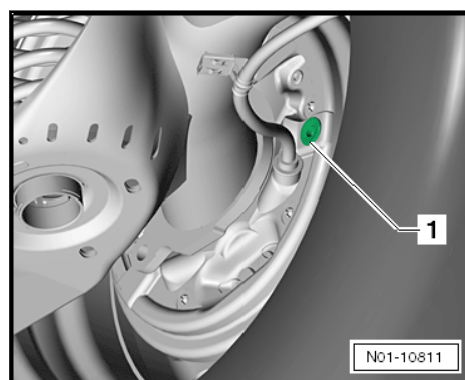


Note

For technical reasons it is possible the links do not go to the correct chapter. If that is the case, please look up the procedure manually in the corresponding infomedia.

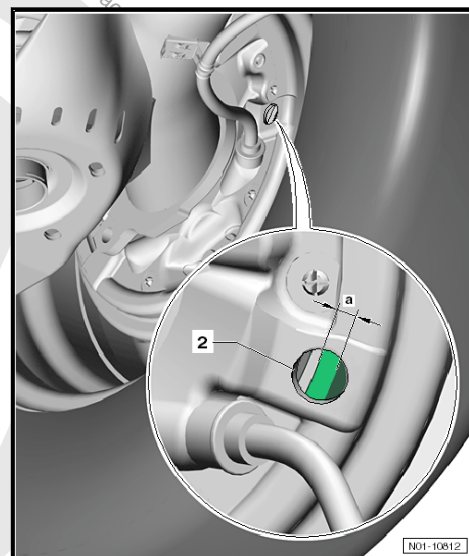
4.14.3 Brake Pad Thickness, Checking, Rear Drum Brake

- Remove the plug -1-.





- Check the brake pad thickness -a- without the locking plate, by looking through the check hole -2- using a flashlight.



◆ Permissible wear: 2.5 mm

- Make sure there is no brake fluid or grease on the brake pads.



Note

At a thickness of 2.5 mm, brake pads have reached their wear limit and should be replaced (repair measure). Inform the customer!

Procedure

Refer to ➔ Brake System; Rep. Gr. 46; Rear Brakes, Servicing, Drum Brake.

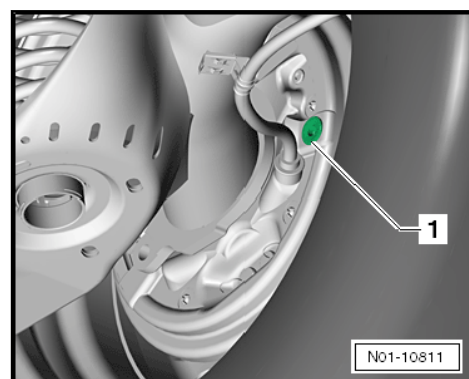
Suspension ➔ Brake System ➔ Repair Group 46 ➔ Rear Brakes, Drum Brakes, Servicing.



Note

For technical reasons it is possible the links do not go to the correct chapter. If that is the case, please look up the procedure manually in the corresponding infomedia.

- Install the plug -1- when the check is completed.





4.14.4 Brake Rotors, Checking Condition

Check all brake rotors for the following:

- ◆ Cracks
- ◆ Scoring
- ◆ Rust (no rust film)
- ◆ Wear on the brake rotor edge



Note

Inform the customer if any damage is found on the brake rotor that looks like these illustrations. Replacing a brake rotor is a repair procedure.

4.15 Diesel Fuel Filter, Replacing

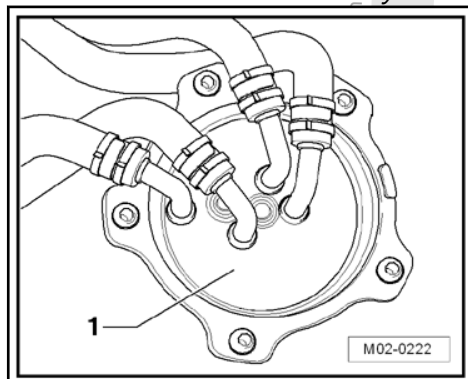
⇒ [F4.15.1 filter, Replacing, System 1, page 123](#)

⇒ [F4.15.2 filter, Replacing, System 2, page 124](#)

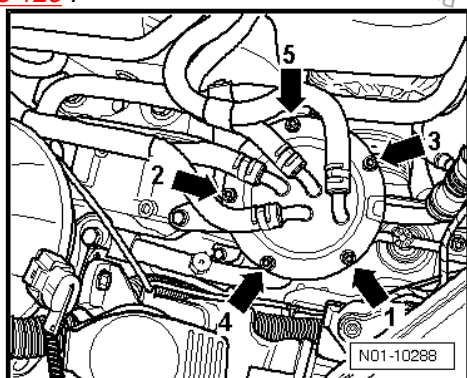


Note

There are two different fuel filter systems.



System 1, procedure descriptions. Refer to ⇒ [F4.15.1 filter, Replacing, System 1, page 123](#).



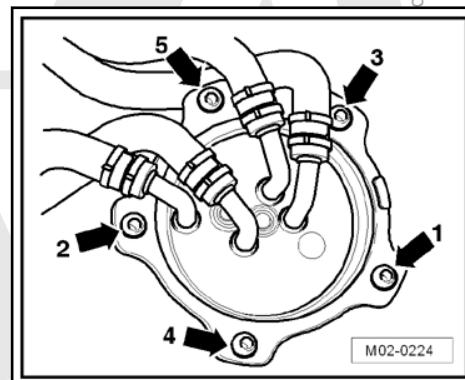
System 2, procedure descriptions. Refer to ⇒ [F4.15.2 filter, Replacing, System 2, page 124](#).

4.15.1 Fuel Filter, Replacing, System 1

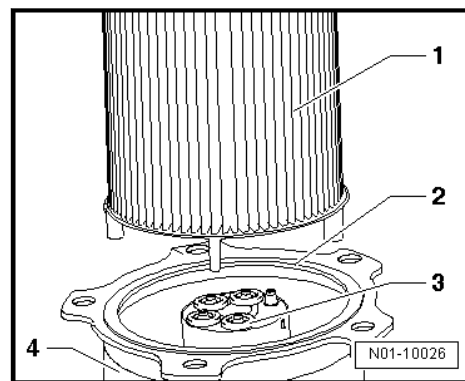


Note

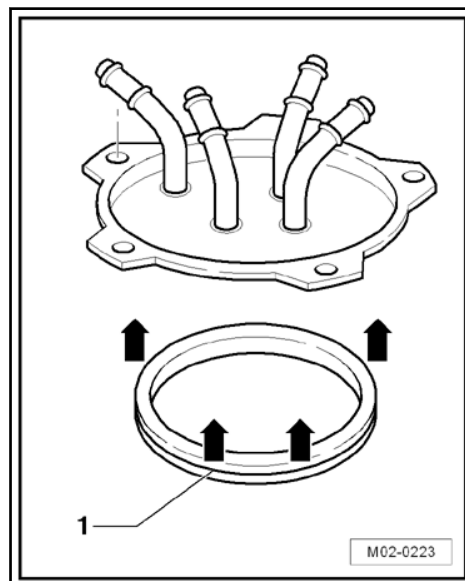
- ◆ *Make sure that no diesel fuel gets onto the coolant hoses.*
- ◆ *Clean the hoses immediately, if necessary!*
- ◆ *Please follow all waste disposal regulations!*
- Loosen all the fuel filter upper section bolts -arrows- in a diagonal sequence by approximately 1.5 to 2 turns.



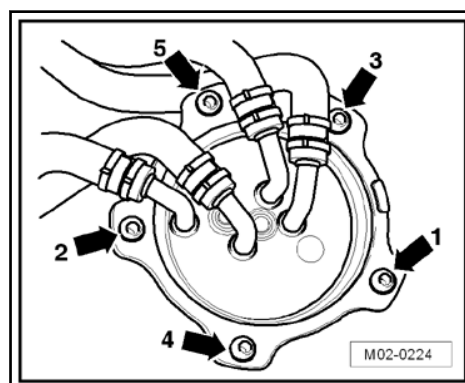
- Completely remove the bolts and remove the fuel filter upper section.
- Remove the replacement filter -1- and seal -2- from the fuel filter lower section -4-.



- Replace the gasket -3-
- Insert the new replacement filter in the fuel filter lower section.
- Place the new seal -1- on the fuel filter upper section.



- Place the fuel filter upper section with seal on lower section.
- Fasten the fuel filter upper section with fuel filter lower section.



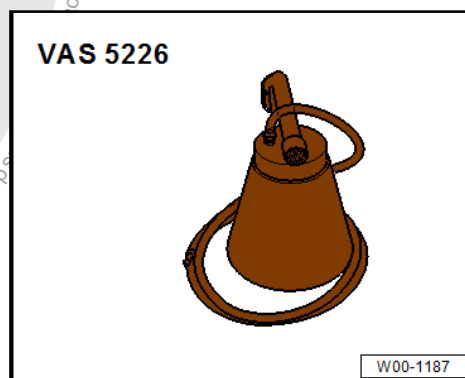
- Tighten the bolts according the sequence shown in the image.
- Tighten bolts to a tightening specification of 5 Nm.

Following the tightening sequence will prevent the upper section of the fuel filter from deforming and thereby damaging the gasket.

4.15.2 Fuel Filter, Replacing, System 2

Special tools and workshop equipment required

- ◆ Suction Pump -VAS 5226-





◆ Angled Screwdriver -VAS 6543-

VAS 6543



W00-10740

Remove the engine cover. Refer to [⇒ C4.33 over Top, Removing and Installing](#), page 170.

Removing



Caution

- ◆ Do "NOT" remove the fuel hoses from the fuel filter cover and do "NOT" lift on the connections. This will cause leaks and damage to the fuel filter upper section.
- ◆ Make sure no diesel fuel gets on to other components in the engine compartment. Clean it off right away!

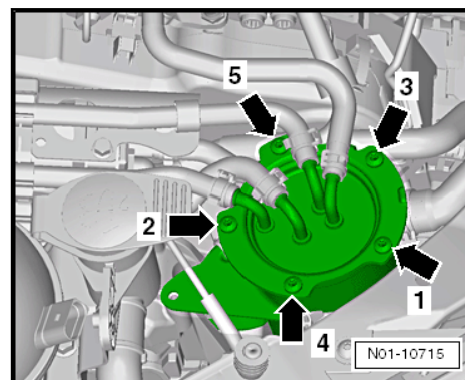


Note

Please follow all waste disposal regulations!

Perform the following procedure:

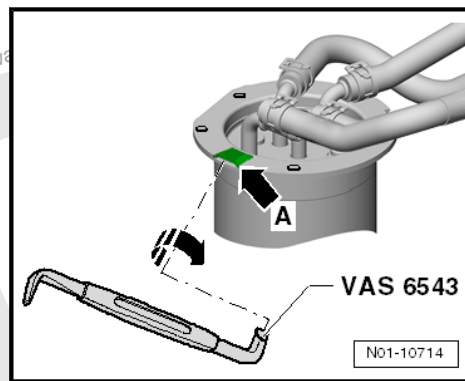
- Remove all the bolts -arrows- and then remove the fuel filter upper section.



Note

If the fuel filter upper section is stuck, loosen it as follows:

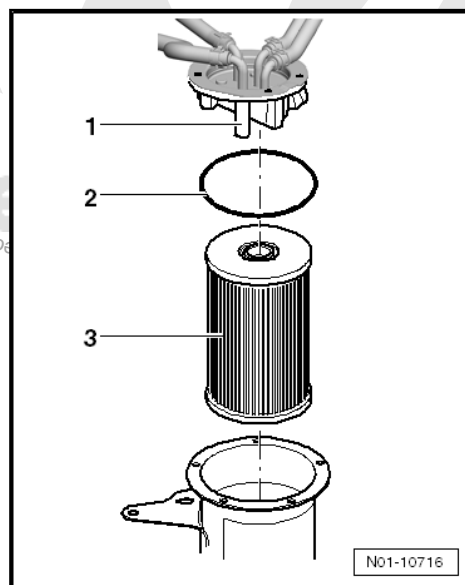
The fuel filter upper section can be lifted at the groove -arrow A- using the Angled Screwdriver -VAS 6543-.



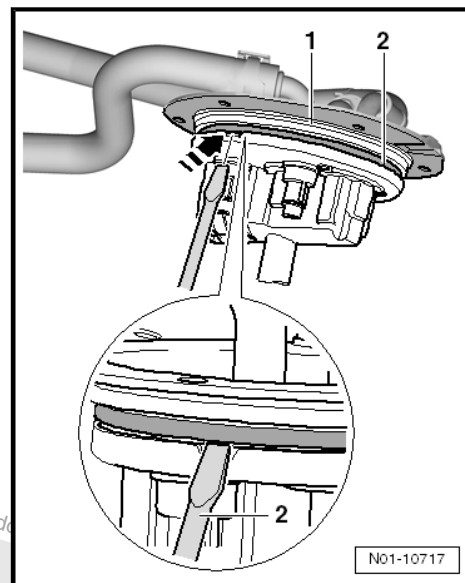
- ◆ The groove can be different sizes depending on the version of the upper section.
- Insert the corresponding side of the Angled Screwdriver - VAS 6543- in the assembly groove -arrow A- and then turn the Angled Screwdriver -VAS 6543-.

This will lift the fuel filter upper section.

- Remove the filter -3- from the fuel filter lower section.



- Remove the old seal -2- from the fuel filter upper section -1- by prying it out of the specified groove -arrow-.



Caution

Remove all diesel fuel, dirt and water from the fuel filter lower section using the Suction Pump -VAS 5226-.

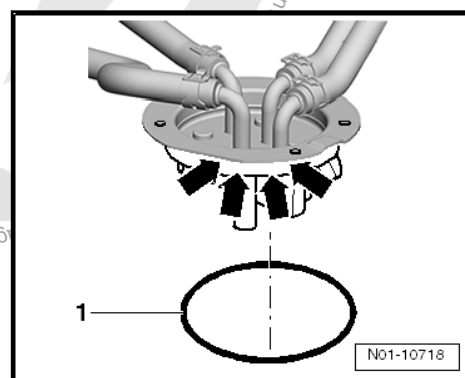


Note

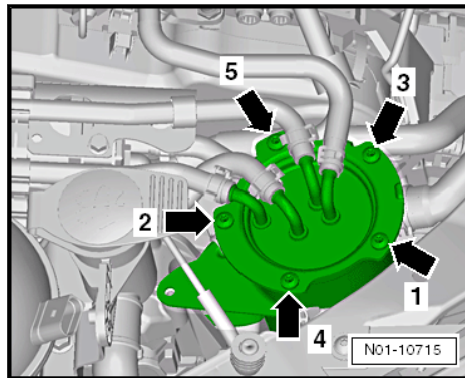
Please follow all waste disposal regulations!

Installing

- Install a new filter into the fuel filter lower section.
- Coat the new seal 1- with a small amount of diesel fuel and insert it into the fuel filter upper section -arrows-.



- Mount the fuel filter upper section and gasket onto the fuel filter lower section and press it on evenly until the two sections contact each other completely.



Caution

Do "NOT" tighten the screws on the upper section before it completely contacts the lower section.

- Install all the bolts in the fuel filter lower section and tighten them hand-tight.
- Then tighten the screws to 5 Nm according to the sequence as shown.

The described procedure prevents the seal from being damaged.

Bleeding the fuel system

Procedure. Refer to »Diesel Injection Fuel Preparation«⇒ Rep. Gr. 23; Fuel System, Filling and Bleeding»Fuel System Filling and Bleeding«.



Note

- ♦ *If there still is air in the fuel system, the engine may go into the emergency running mode during the road test. Shut off the engine and erase the DTC memory.*
- ♦ *For technical reasons it is possible the links do not go to the correct chapter. If that is the case, please look up the procedure manually in the corresponding infomedia.*

4.16 Diesel Particulate Filter, Checking

When checking the diesel particulate filter, the ash load threshold is requested.



Note

If the displays indicated in the procedure are not shown on the display, refer to the ⇒ Vehicle Diagnostic Tester Operating Instructions.

ODIS Service

- Connect the Vehicle Diagnostic Tester. Refer to ⇒ [D3.5 iagnostic Tester, Connecting](#), page 57 .
- Switch the ignition on.
- Perform the vehicle identification.
- Enter the order data or select "no order".
- Select "control module".



ODIS Service
– Select “engine electronics”.
– Select “Guided Functions”.
– Select “check particulate filter ash load value”.
– Follow the “Guided Functions” instructions.

4.17 Power Window Regulators, Checking Position



Note

After disconnecting and reconnecting the battery, the power window one-touch up/down function does not work. Therefore, the electric windows must be positioned again immediately, before a new vehicle is delivered. The vehicle battery must not be disconnected after positioning.



WARNING

After disconnecting and reconnecting the battery, force limitation of the power window regulators will not function. This can cause serious injuries if, for example, fingers are caught in the window!

Perform the following procedure to position the power window regulator:



Note

The following procedure description is for the left front window. The other window regulators are positioned the same way by pushing/pulling the respective button in the driver door.

- Switch the ignition on.
- Close all doors and windows completely.
- Hold left front side-window in position “Close” by pulling and holding switch for longer than 1 second.
- Pull the button again for one second. Now when the button is pressed briefly the window will lower fully and when the button is lifted briefly the window will raise fully.
- Switch off the ignition.

4.18 Front Lid: Hook, Lubricating, Golf Wagon from MY 2007, Golf Wagon from MY 2010, Jetta from MY 2005

Special tools and workshop equipment required

- ◆ Universal Oil Spray G 000 115 A2



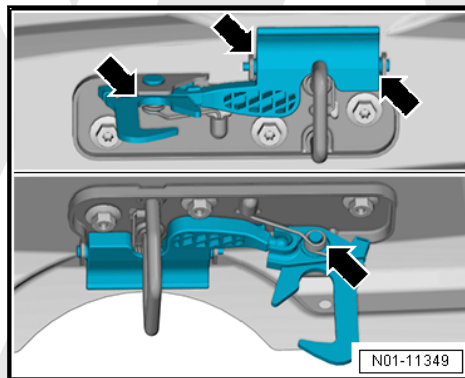


Note

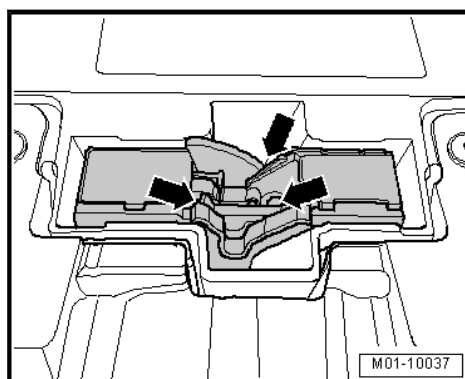
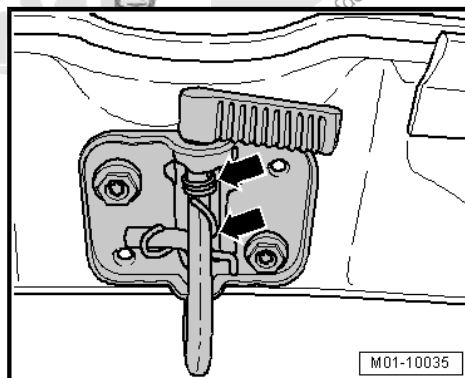
Vehicle must be at least at room temperature.

- Coat the hood safety catch with Universal Oil-Spray G 000 115 A2 at the positions marked with arrows.

a)



b)



- Operate the movable components several times to allow the universal oil to seep in.
- Remove any excess lubricant with a lint-free cloth.



4.19 Multipurpose Additive for Gasoline, Adding, Not for North America Market



Note

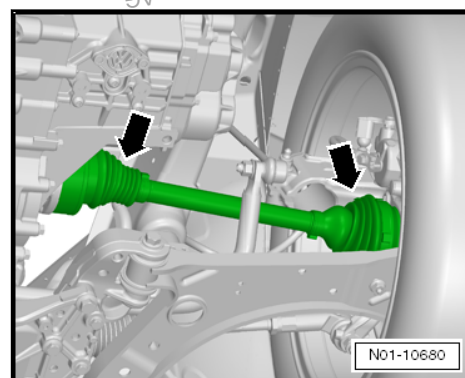
- ◆ Only applies to China, Russia, and India.
 - ◆ Use only additives that meet the standard VW 507 53 A or VW 507 53 B.
 - ◆ Pay attention to the dosing instructions on the additive tank.
 - ◆ For maximum effectiveness, recommend to the customer after adding the additive to completely fill up the fuel tank.
- Add multipurpose additive for gasoline to the regular fuel tank at every service.

China	Russia	India
– Use VW 507 53 B for all gasoline engines including CNG, E-85 MultiFuel.	– Use VW 507 53 B for all gasoline engines including CNG, E-85 MultiFuel. – Use VW 507 53 A for all gasoline engines except CNG, E-85 MultiFuel.	– Use VW 507 53 B for all gasoline engines including CNG, E-85 MultiFuel. – Use VW 507 53 A for all gasoline engines except CNG, E-85 MultiFuel.
◆ Multipurpose Additive -G 001 780-M3-	◆ Multipurpose Additive -G 001 780-M3- ◆ Multipurpose Additive -G 001 770-A2-	◆ Multipurpose Additive -G 001 780-M3- ◆ Multipurpose Additive -G 001 770-A2-
– Follow the dosing instructions on the bottle.	– Follow the dosing instructions on the bottle.	– Follow the dosing instructions on the bottle.

4.20 CV Boots, Visually Inspecting

Perform the following procedure:

- Check the outer and inner joint bellows -arrows- for leaks and damage.





4.21 Engine Cover Rubber Bushing, Replacing

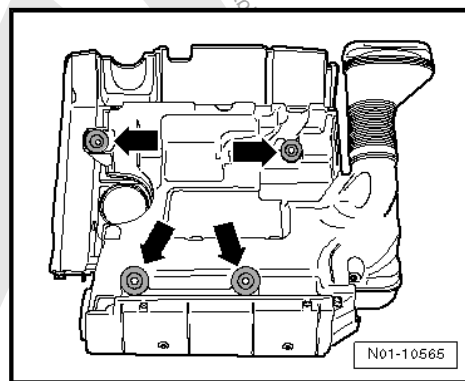
Only Jetta GTI edition 30



Note

The rubber bushing from the engine cover is replaced every 60,000 km (40,000 miles) with the air filter change of the Jetta GTI edition 30.

- Remove the engine cover. Refer to [C4.33 over Top, Removing and Installing](#), page 170.
- Place the top side of the engine cover on a soft surface to avoid damaging the chrome applications.
- Remove the engine cover rubber bushing -arrows- upward.

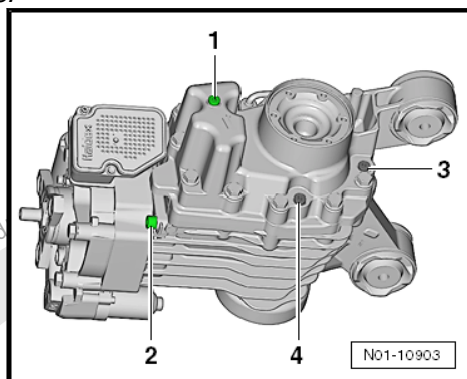


- Push the new rubber bushing back in the guide.
- Install the engine cover in reverse order of removal.

4.22 BorgWarner Clutch, Changing Oil

Note

- ◆ *On vehicles equipped with a BorgWarner clutch, the drain and sealing screws of both systems get interchanged due to the integrated housing. This results in avoidable mistakes in maintenance and servicing, which can result in the BorgWarner clutch or the axle drive failing.*
- ◆ *The BorgWarner clutch and axle drive are a single unit with separate oil housings.*



- ◆ -1- Plug for filler hole for the BorgWarner oil.
- ◆ -2- Drain plug for the BorgWarner oil.
- ◆ -3- Plug for the gear oil filler hole.
- ◆ -4- Gear oil drain plug.

Special tools and workshop equipment required

- ◆ Digital Thermometer -VAS 6519-

VAS 6519



W00-11026

- ◆ Torque Wrench 1331 5-50Nm -V.A.G 1331-

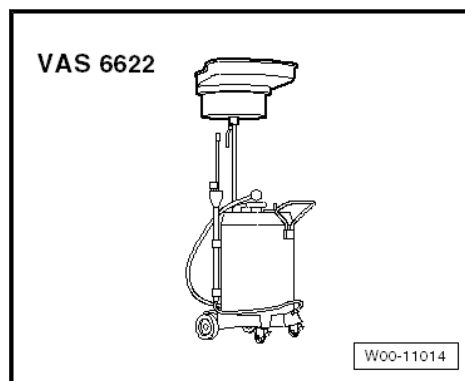
V.A.G 1331



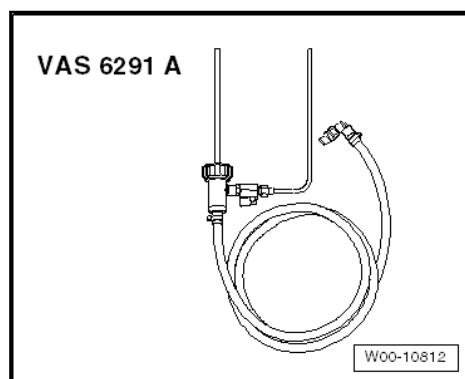
W00-0427



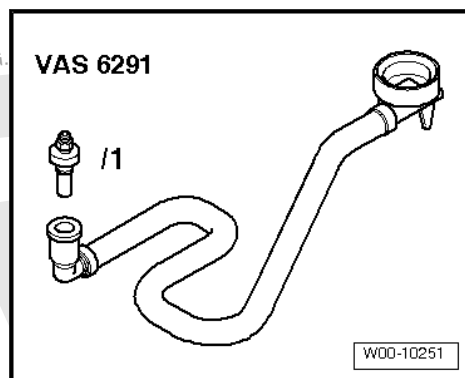
◆ Used Oil Collection and Extraction Unit -SMN372500-



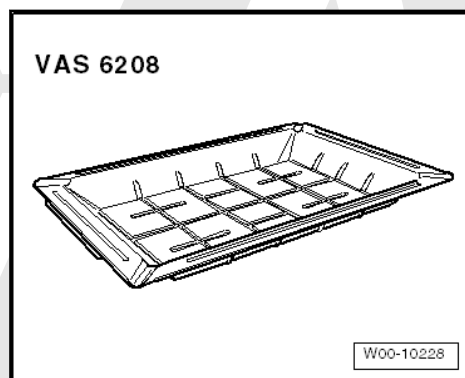
◆ Charging Device for AWD Clutch Coupling 2 -VAS 6291 A-



◆ Charging Device For BorgWarner Coupling 2 - Oil Filling Adapter -VAS 6291/1-

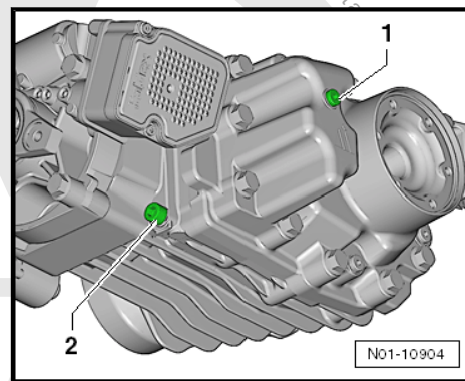


◆ Shop Crane - Drip Tray -VAS 6208-



Oil, Draining

- Raise vehicle with lift and position Used Oil Collection and Extraction Unit -SMN372500- under BorgWarner clutch.
- Remove the oil drain plug -2- and drain the high-performance oil completely.

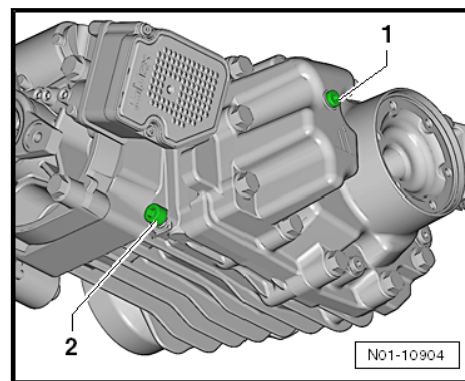


- Install a new oil drain plug with a new gasket and tighten to the tightening specification. The oil drain plug has a permanent gasket.

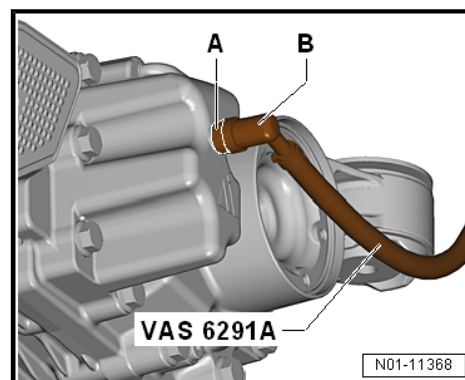
Tightening Specification	Nm
Oil drain plug	30

Oil, Filling

- Remove the oil filler plug -1-.



- Disconnect the elbow -B- from the adapter -A- and screw the adapter completely into the oil filler opening.



- Position the elbow again and route the hose over the drive axle to prevent it from hanging down.
- Place the Shop Crane - Drip Tray -VAS 6208- under the final drive.
- After the hose is routed above the left rear wheel and away from vehicle, the vehicle can be drained.

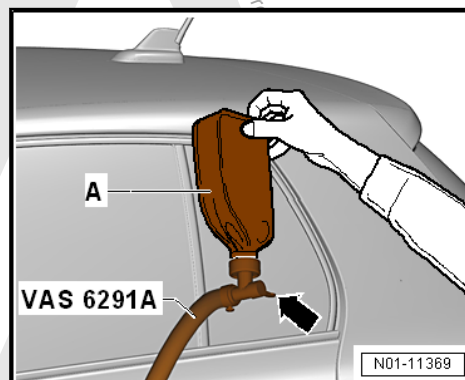


Note

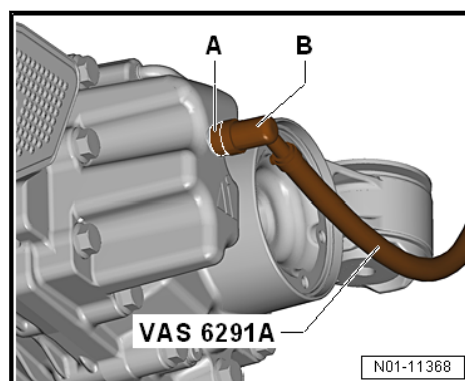
- ♦ The oil temperature when checking the oil level is 20 °C to 40 °C (68 °F to 104 °F).
- ♦ Pay attention to the temperature of the oil container when filling.
- ♦ The oil temperature can be measured using the Digital Thermometer -VAS 6519-.

Oil capacity and oil specification. Refer to ➤ [page 137](#) .

- With the valve -arrow- closed, screw the oil container -A- onto the Charging Device for AWD Clutch Coupling 2 -VAS 6291A-.

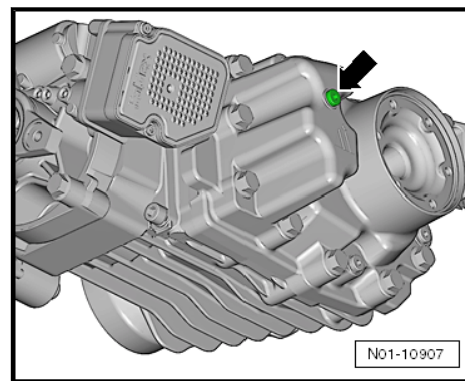


- Open the valve -arrow- and hold the oil container as shown.
- Using the Charging Device for AWD Clutch Coupling 2 -VAS 6291A-, fill with oil until it flows out between the adapter and the transmission housing.
- Remove the Charging Device For BorgWarner Coupling 2 -VAS 6291 A-.
- Remove the adapter -A-.
- If necessary, let the excess oil flow out until it only drips.



The oil level is correct when the oil drips out of the oil filler hole.

- Install a new oil filter plug -arrow- with a permanent seal and tighten to the tightening specification.



Tightening Specification	Nm
Oil filler plug	15

Check the specified temperature range while checking the oil level, if while filling an oil temperature between 20 °C to 40 °C (68 °F to 104 °F) could not be guaranteed.

The oil temperature can be measured using the Digital Thermometer -VAS 6519-.

If the oil temperature is not between 20 to 40 °C (68 to 104 °F), either drive the vehicle to warm it up or let the oil temperature cool down.

Oil Capacities and Oil Specifications	
4-MOTION oil capacity	Refer to ➔ Rear Final Drive; Rep. Gr. 00; Codes, Assembly Mounts, Capacities, Golf from MY 2009.
Oil specification	Refer to the ➔ Electronic Parts Catalog (ETKA).

4.23 Hybrid Components, Visually Inspecting for Damage of the High-Voltage Components and Wires



WARNING

Hybrid vehicles have a high-voltage system with a very high voltage. Risk of electrocution. Visually inspect the high-voltage components in the work area before starting work. Pay attention to the general warnings. Refer to ➔ Electrical Equipment Hybrid; Rep. Gr. 93; General Warning Messages for Procedures on the High-Voltage Vehicle Electrical System.



WARNING

- ◆ *All work on vehicles with a high-voltage system may only be performed by technicians that are certified as "technicians trained in electrical systems".*
- ◆ *Contact to the responsible high-voltage technician or expert if something needs clarification.*



Procedure: Visual Inspection

When performing a visual inspection inside the engine compartment, be sure to inspect the electric drive power and control electronics, the high-voltage cables for the battery and the A/C compressor, the high-voltage cable for the hybrid module.

When performing a visual inspection of the rear area, pay attention to the hybrid battery, the battery high-voltage cables and the E-box with the service plug!

When performing the visual inspection, pay attention to the following:

- ◆ The high-voltage components must not show any damage on the outside.
- ◆ The insulation on the high-voltage cable must be intact without any damage.
- ◆ Look for any unusual deformations on the high-voltage cable.



Note

Inform the responsible high-voltage technician immediately if something seems wrong or missing.

4.24 Interior and Exterior Body, Visually Inspecting for Corrosion with Doors and Lids Opened

Test Locations

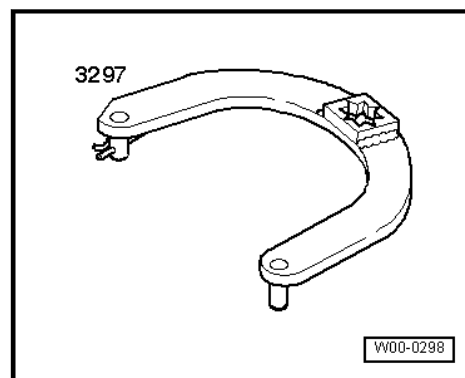
- ◆ Sunroof frame
- ◆ Inner and outer door frame
- ◆ The area around the trim moldings
- ◆ Windshield roof edge
- ◆ Outer and inner A-pillar
- ◆ Hood
- ◆ Wheel housings
- ◆ Inner and outer rear lid

4.25 Ribbed Belt, Adjusting Tension, on Engines without Automatic Tensioning Roller

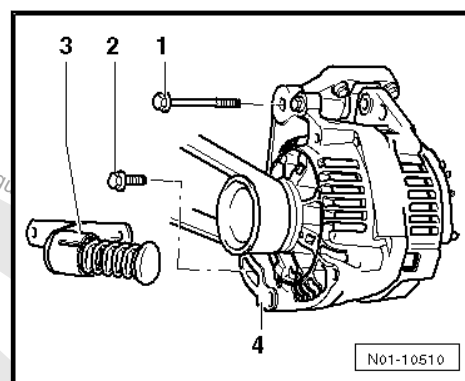
Special tools and workshop equipment required



◆ Tensioning Lever -3297-



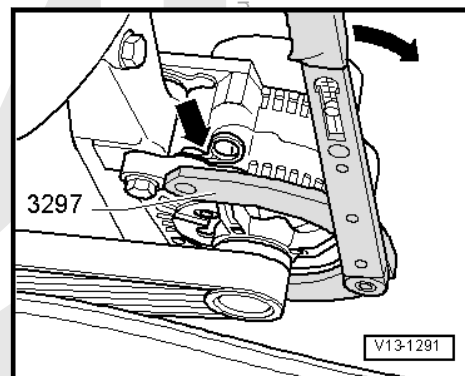
- Loosen the bolts -1 and 2-.



3 - Tensioning Bracket

4 - Generator

- Insert clamping lever, secure with pin -arrow- and tip generator down (use for example torque wrench as drive for 3297).



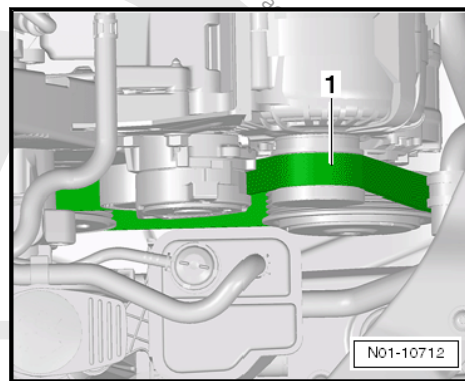
- Push the generator with the tensioning lever at least three times all the way in the tensioning bracket to ensure an optimal ease of movement.
- First tighten the lower then the upper generator bolts to 25 Nm.

4.26 Ribbed Belt, Checking Condition

Perform the following procedure:

- Turn the engine at the vibration damper/belt pulley using a socket.

Check the ribbed belt -1- for:



- ◆ Sub-surface cracks (cracks, core ruptures, cross sectional breaks)
- ◆ Separation (cover layer, belt cords)
- ◆ Breaks at lower layer
- ◆ Fraying of cords
- ◆ Wear at flanks (material wear, frayed flanks, hardening or glazing of flanks, surface cracks)
- ◆ Oil or grease contamination



Caution

- *The ribbed belt must be replaced if any damage is found.*
- *This will prevent any belt malfunctions.*
- *Replacing the belt is a repair procedure.*

4.27 Instrument Cluster, Adapting Menu Language

⇒ [t4.27.1 he Main Menu on Vehicles without a Multifunction Steering Wheel", page 140](#)

⇒ [t4.27.2 he Main Menu, Vehicles with a Multifunction Steering Wheel, Version 1", page 142](#)

⇒ [t4.27.3 he Main Menu, Vehicles with a Multifunction Steering Wheel, Version 2", page 142](#)

The different languages can be accessed in the instrument cluster display main menu.

4.27.1 Accessing the Main Menu on Vehicles without a Multifunction Steering Wheel

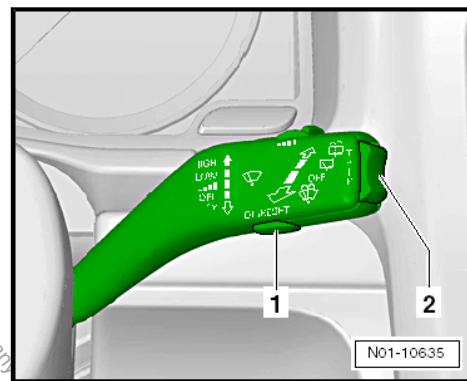


Note

The vehicle electronics and optional equipment determine which menus will be shown in the display.

- Switch the ignition on.

An outline of a vehicle appears.



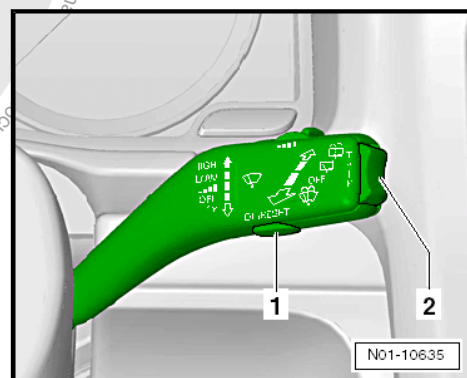
- Press the button -1- in the windshield wiper lever one time.
- To move back out of another menu into the main menu, hold the rocker switch -2- depressed for two seconds.

This procedure might have to be repeated until the main menu appears.

2. Bring up the menu “Settings”

- Press the top or the bottom of the rocker switch -2- to highlight a point on the menu.

The marked menu item is located between the two horizontal lines. There is also a small triangle on the right side.



- Highlight “settings”.
- Press the button -1- in the windshield wiper lever.

The menu “Settings” is brought up.

The following will appear in “settings”:

- 1 - Settings for Time
- 2 - Speed Warning for Winter Tires
- 3 - Units
- 4 - Language
- 5 - Parking Heater
- 6 - Light & View and Comfort

3. Bring up the “Language” menu

- Select »language« and press the button -1- to confirm.

Several languages are displayed in the menu.

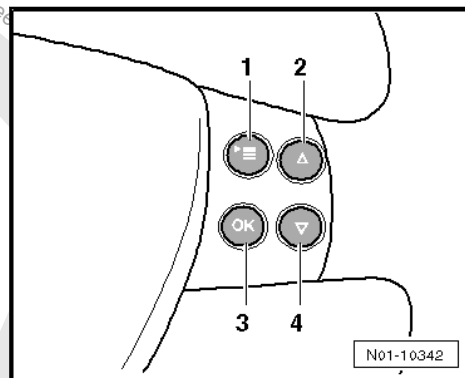
Select the language and press the button -1- to confirm.



4.27.2 Accessing the Main Menu, Vehicles with a Multifunction Steering Wheel, Version 1

- Switch the ignition on.

An outline of a vehicle appears.



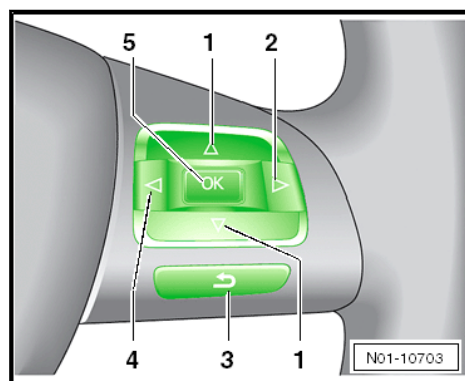
- Press the button -3- until the “Settings” menu appears.
- Press the button -4- and select “Language”.
- Confirm with button -3-.
- Select the language.
- Confirm with button -3-.
- Exit the menu with the button -1-.

4.27.3 Accessing the Main Menu, Vehicles with a Multifunction Steering Wheel, Version 2

- Switch the ignition on.

An outline of a vehicle appears.

- Press the button -5- to access the main menu.



- Press the buttons -2- or -4- until the “settings” menu appears.
- Press the button -5-.
- Select the language with button -1-.
- Confirm with the button -5-.
- Exit the menu with the button -3-.



4.28 Compass, Setting Zone and Calibrating, USA, Canada and Mexico

⇒ [I4.28.1 nformation", page 143](#)

⇒ [Z4.28.2 one, Setting", page 144](#)

⇒ [C4.28.3 alibrating", page 146](#)

4.28.1 General Information



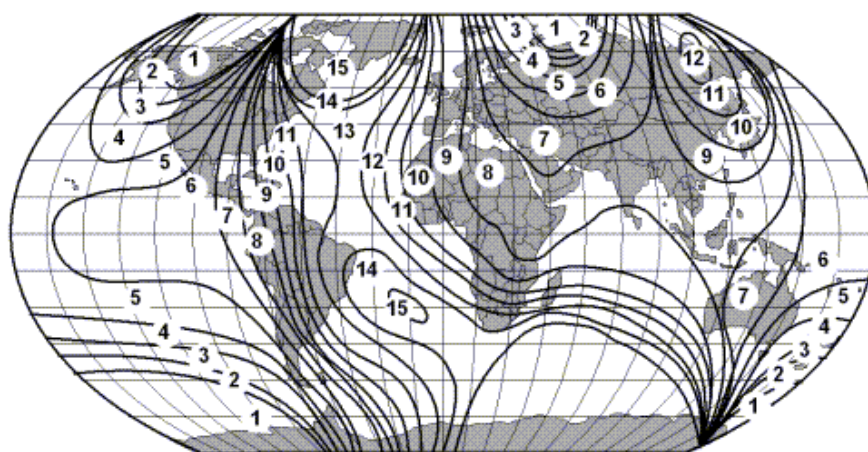
Note

Only applies to vehicles with highline instrument cluster.

The compass indicates the direction the vehicle is facing.

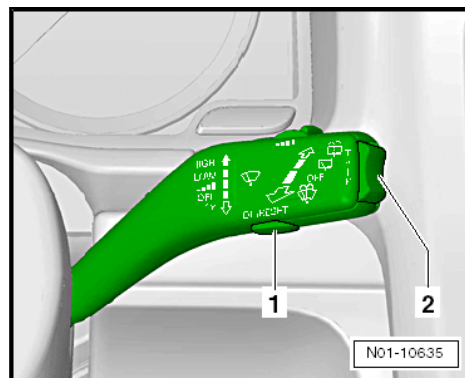
For a correct reading, the correct compass zone must be adjusted.

- Determine the geographic area, referring to the zone map, for example zone 8 for Germany, zone 6 for Mexico, etc.





Setting the compass zone and calibrating the compass is performed in the "main menu", using the button -1- and the rocker switch -2- of the windshield wiper stalk.



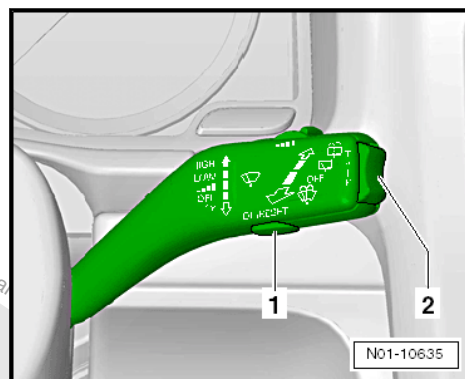
- ◆ Button -1- confirms the menu items.
- ◆ Use the rocker switch -2- to switch from one menu to another.

4.28.2 Compass Zone, Setting

1. Bring up the main menu

- Switch the ignition on.

An outline of a vehicle appears.



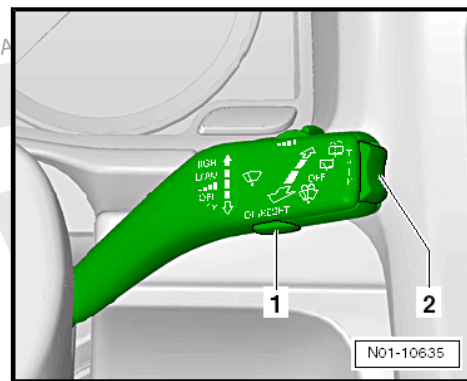
- Press the button -1- in the windshield wiper lever one time.
- To move back out of another menu into the main menu, hold the rocker switch -2- depressed for two seconds.

This procedure might have to be repeated until the main menu appears.

2. Bring up the menu "Settings"

- Press the top or the bottom of the rocker switch to highlight a point on the menu.

The marked menu item is located between the two horizontal lines. There is also a small triangle on the right side.



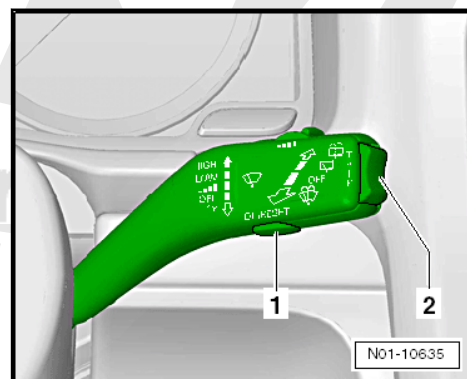
- Highlight “settings”.
- Press the button -1- in the windshield wiper lever.

The menu “Settings” is brought up.

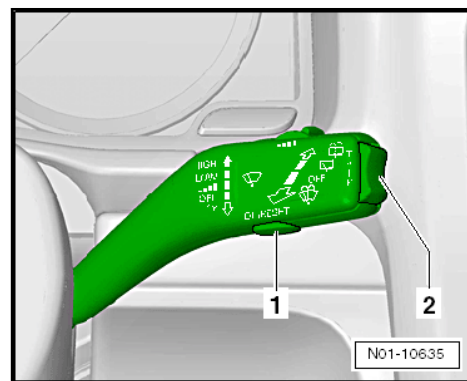
3. Bring up the menu “Comfort”

- Highlight “Comfort” with the rocker switch -2-.

The menu “Comfort” is brought up.



4. Bring up the menu “Compass”



- Highlight “compass” with the rocker switch -2-.

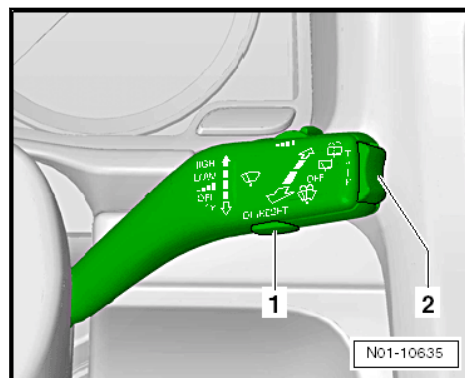
The menu “Compass” is brought up.

The following will appear in “compass”:

- 1 - Direction
- 2 - Zone
- 3 - Calibration
- 4 - Back



5. Bring up the menu "Zone"

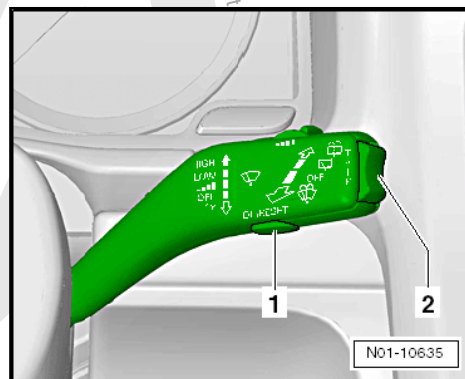


Select "zone" and press the button -1- to confirm.

The following will appear in "compass":

- 1 - Direction
 - 2 - The zone (for example zone 8 for Germany, zone 6 for Mexico)
 - 3 - (+1 Zone) the ability to set 1 zone higher
 - 4 - (-1 Zone) the ability to set 1 zone lower
 - 5 - Back
- Highlight "+ 1 zone" or "- 1 zone" with the rocker switch. Press the button -1- to maximize or minimize the compass zone appearing in the display.

6. Exit the menu



- Highlight "back" with the rocker switch -2-.
- Press the button -1-.

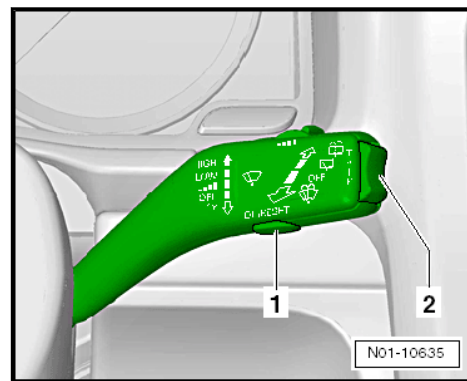
The menu for "Compass" is exited and the last displayed menu is brought up.

4.28.3 Compass, Calibrating

1. Bring up the main menu

- Switch the ignition on.

An outline of a vehicle appears.



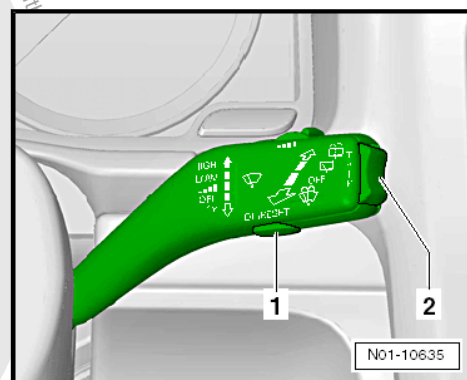
- Press the button -1- in the windshield wiper lever one time.
- To move back out of another menu into the main menu, hold the rocker switch -2- depressed for two seconds.

This procedure might have to be repeated until the main menu appears.

2. Bring up the menu “Settings”

- Press the top or the bottom of the rocker switch to highlight a point on the menu.

The marked menu item is located between the two horizontal lines. There is also a small triangle on the right side.



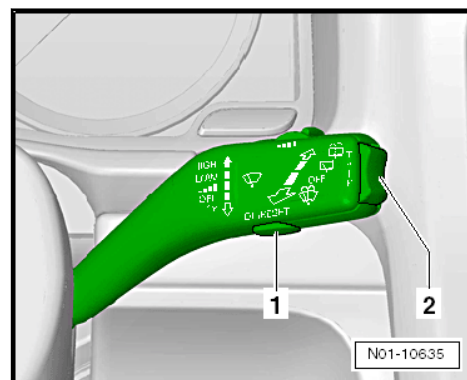
- Highlight “settings”.
- Press the button -1- in the windshield wiper lever.

The menu “Settings” is brought up.

3. Bring up the menu “Comfort”

- Highlight “Comfort” with the rocker switch -2-.

The menu “Comfort” is brought up.





4. Bring up the menu "Compass"

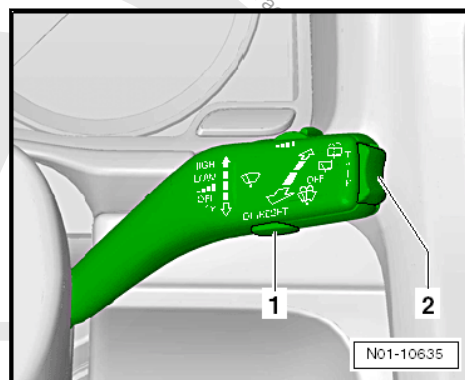
- Highlight "compass" with the rocker switch -2-.

The menu "Compass" is brought up.

The following will appear in "compass":

- 1 - Direction
- 2 - Zone
- 3 - Calibration
- 4 - Back

5. Bring up the menu "Calibration"



Select »calibration« and press the button -1- to confirm.

The following will appear in "calibration":

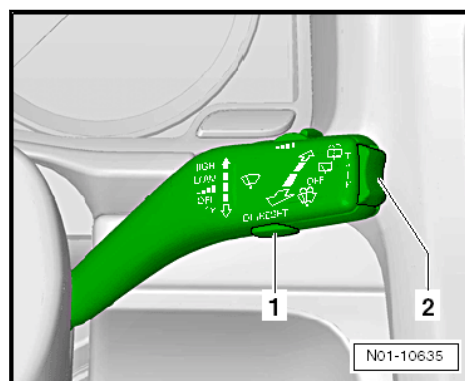
- 1 - To calibrate, a full circle must be driven
- 2 - Calibrating
- 3 - Back

6. Bring up the menu "Calibrating"

Select »calibrate« and press the button -1- to confirm.

The following will appear in "calibrate":

- 1 - Driving in a full circle



- Press the button -1-.
- Drive in a full circle at a speed of less than 10 mph (20 km/h (12.4 mph)).

"CAL" is indicated at the top in the display, next to the arrow for direction.



After completing the calibration, the indication "CAL" is replaced by the actual direction (for example "N" for North).

4.29 Cooling System, Checking Freeze Protection and Coolant Level

⇒ [P4.29.1 Protection, Checking and Adding Coolant Additive", page 149](#)

⇒ [L4.29.2 Level, Checking and Adding Coolant Additive", page 152](#)

⇒ [R4.29.3 Ratio:", page 153](#)

4.29.1 Freeze Protection, Checking and Adding Coolant Additive



Caution

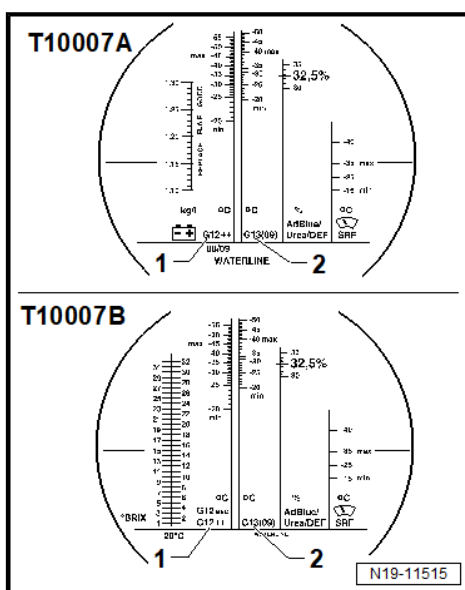
Use only distilled water for mixing coolant additives. By using distilled water the optimum corrosion protection can be reached.





Note

- ◆ The water used for mixing greatly influences the effectiveness of the coolant. Do to the different water contents which can vary due to country or region, the water quality used is defined. Distilled water fulfills all the requirements. For this reason, the coolant must be mixed with distilled water when supplementing and refilling the cooling system.
- ◆ Use only coolant additives according to the ➔ Electronic Parts Catalog (ETKA). Using other coolant additives can impair the corrosion protection. Loss of coolant can cause considerable damage to the engine.
- ◆ Coolant in the correct mixing ratio prevents freezing and corrosion damage as well as calcification. The boiling temperature is also increased. For these reasons the cooling system must have coolant additive the whole year.
- ◆ Especially in countries with tropical climates or when vehicle is driven under heavy engine load, the coolant improves the engine reliability by its increased boiling point.
- ◆ To determine the current freeze protection value, use the Refractometer - T10007A- or Analog Refractometer - T10007B-.



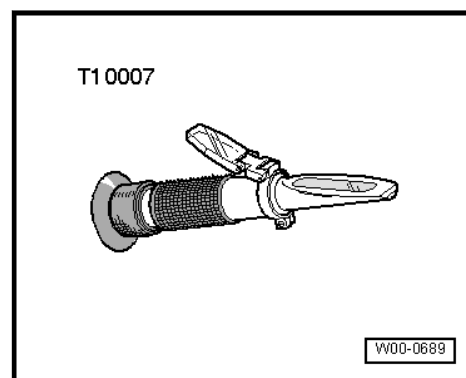
- ◆ The scale -1- on the refractometer refers to the G12++ and G12evo coolant additives.
- ◆ The scale -2- on the refractometer refers to the G13 coolant additive.
- ◆ If more than one type of coolant additive has been used, use the scale for G13 to determine the frost protection.
- ◆ The freeze protection must be set to minimum -25 °C (-13 °F), for countries with an arctic climate, it must be set to approximately -36 °C (-32.8 °F). The freeze protection can be increased only when a stronger freeze protection is required due to climatic conditions. But only down to -48 °C (-54.4 °F), otherwise the cooling effect of the coolant will be impaired.
- ◆ The coolant concentration must not be reduced by adding water, even during the warmer season or in warm countries. The freeze protection must be a minimum of -25 °C (-13 °F).



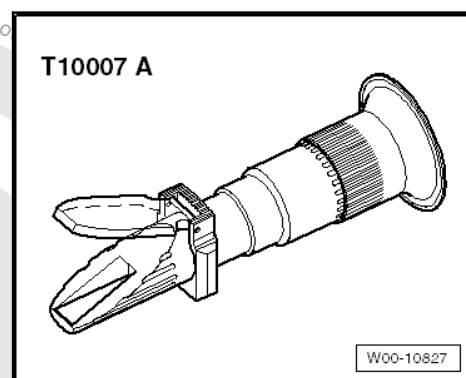
- ◆ *The temperature on the Refractometer corresponds to the »crystallization point«. At this temperature, ice crystals may begin to form in the coolant.*
- ◆ *Used coolant cannot be used again.*
- ◆ *Only use water/coolant additive to lubricate the coolant hoses.*

Special tools and workshop equipment required

- ◆ Refractometer -T10007- or



- ◆ Refractometer -T10007A-

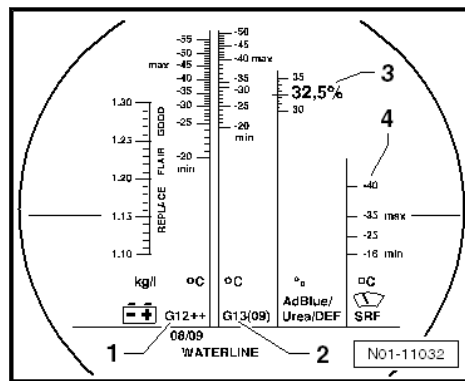


Note

Read the cut-off line to obtain an accurate value for the following tests. Place a drop of water on the glass using a pipette to improve the readability of the cut-off line. The cut-off line can be clearly recognized on the "WATERLINE".

- Check the coolant additive concentration using the Refractometer -T10007- or Refractometer -T10007 A-. (Pay attention to the Owner's Manual).

The refractometer scale -1- applies to coolant additives G 11; G 12; G 12+ and G 12++.



The scale -2- only applies to coolant additive G13.

- Drain some of the coolant and add coolant additive according to the mixture ratio if the freeze protection is inadequate. Refer to ➤ [L4.29.2 level, Checking and Adding Coolant Additive](#), page 152 .

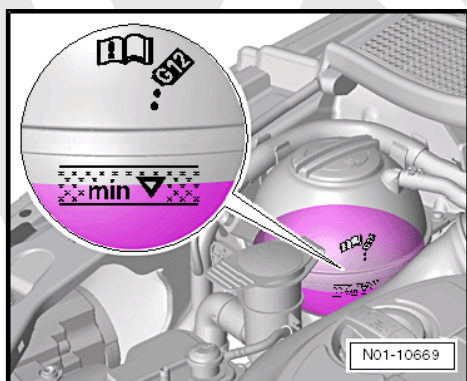


Note

- ◆ *The freeze protection must be ensured down to approximately -25°C (-13 °F).*
- ◆ *If it cannot clearly determined which coolant additive is in the coolant system, use the scale -2- for coolant additive G13.*
- ◆ *Please follow all waste disposal regulations!*
- Check the concentration of the coolant additive again after the road test.

4.29.2 Coolant Level, Checking and Adding Coolant Additive

- Check the coolant level in the reservoir when the engine is cold.
- ◆ Pre-delivery inspection: coolant level above “MIN marking” -arrow-.



- ◆ Inspection service: coolant level above “MIN marking” -arrow-.
- If coolant level is too low, add the missing amount according to the mixture ratio.



Note

Determine cause of fluid loss, which cannot be attributed to normal use and repair (repair procedure).

4.29.3 Mixture Ratio:



Caution

Use distilled water for mixing. Tap or well water do not have the necessary quality to assure the functionality of the coolant.

Freeze protection to	Coolant additive ratio	Water. Refer to ²⁵⁾ .
-25 °C (-13 °F)	Approximately 40 %	Approximately 60 %
-35 °C (-31 °F)	Approximately 50 %	Approximately 50 %
-40 °C (-40 °F)	Approximately 60 %	Approximately 40 %

25) Use distilled water only.

4.30 Air Filter, Cleaning Housing and Replacing Filter Element

⇒ [F4.30.1 Iiter Element, Removing and Installing, 1.4L SRE Gasoline Engines](#), page 153

⇒ [F4.30.2 Iiter Element, Removing and Installing, 1.4L TSI Hybrid Engine](#), page 156

⇒ [F4.30.3 Iiter Element, Removing and Installing, 2.5L SRE Gasoline Engines](#), page 158

⇒ [F4.30.4 Iiter Element, Removing and Installing, 1.6L SRE Gasoline Engines](#), page 161

⇒ [F4.30.5 Iiter Element, Removing and Installing, 2.0L FSI and 2.0L SRE Gasoline Engines](#), page 162

⇒ [F4.30.6 Iiter Element, Removing and Installing, 2.0L TFSI Engines](#), page 163

⇒ [F4.30.7 Iiter Element, Removing and Installing, 1.4L TSI Engines \(90 kW\)](#), page 165

⇒ [F4.30.8 Iiter Element, Removing and Installing, Diesel Engines and 1.4L TSI Engines \(103 kW, 118 kW and 125 kW\), 2.0L TSI Engines \(155 kW\)](#), page 166

⇒ [F4.30.9 Iiter Element, Removing and Installing, 1.8L TSI Engines](#), page 168

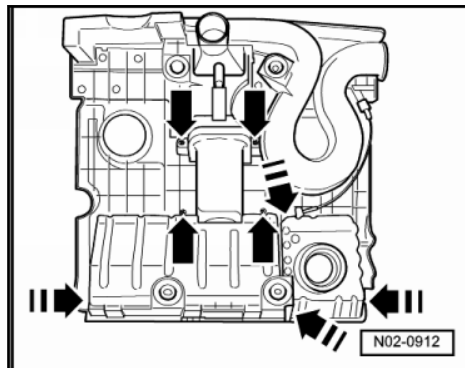
4.30.1 Air Filter Element, Removing and Installing, 1.4L SRE Gasoline Engines

- There are two different air filter versions.
- ◆ Air filter type 1: air filter housing is integrated in the engine cover. Refer to [⇒ page 154](#).
- ◆ Air filter type 2, air filter housing is integrated ion the engine. Refer to [⇒ page 155](#).

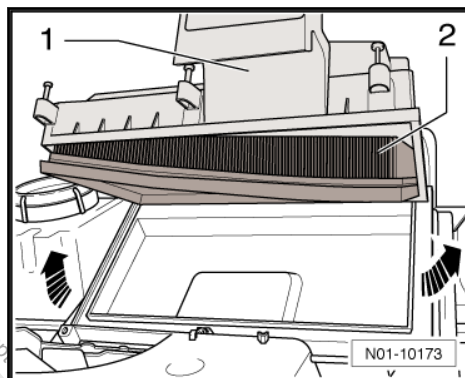


Air Filter Version 1

- Remove the engine cover. Refer to [⇒ C4.33 over Top, Removing and Installing](#), page 170.
- Remove the screws -arrows-.



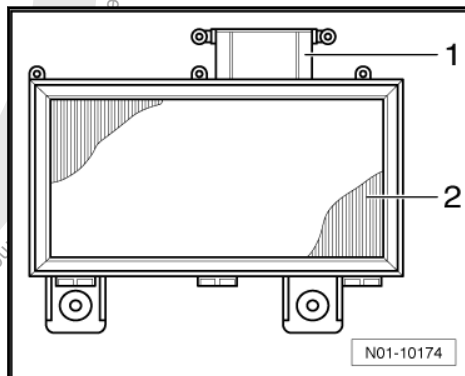
- Remove the air filter housing lower section -1- and the air filter element -2-.



Note

Please follow all waste disposal regulations!

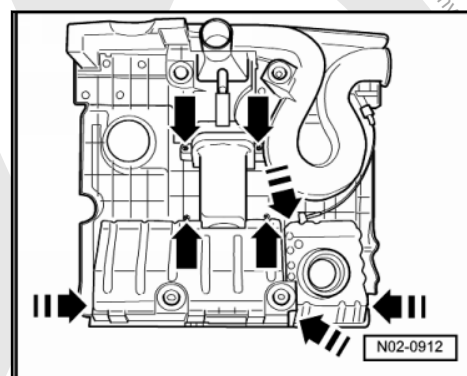
- Clean the air filter housing lower section.
- Install a new filter element -1- in the air filter housing lower section -2-.





Note

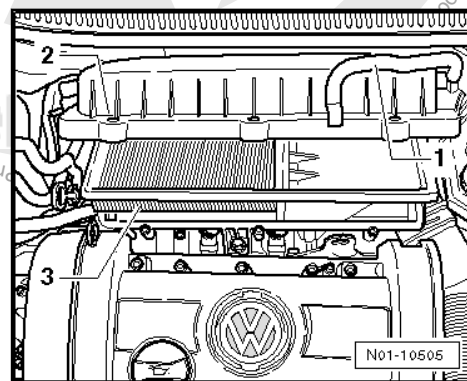
- ◆ *Self-tapping screws are used as standard for fastening the air filter housing upper section to the air filter housing lower section as well as the intake tubes. If these screws are loosened or tightened using a cordless drill, the threads in the air filter housing upper section can be damaged.*
- ◆ *For this reason, a cordless drill may only be used when the following prerequisites are present:*
- ◆ Drill motor speed must not exceed 200 RPM.
- ◆ A tightening specification of maximum 3 Nm must be adjustable.
- Tighten the screws -arrows- to maximum 3 Nm.



Air Filter Version 2

Perform the following procedure:

- Remove the hose -1- carefully.



- Loosen the air filter housing upper section bolts -2- and tilt them upward.
- Remove the air filter -3-.



Note

Please follow all waste disposal regulations!

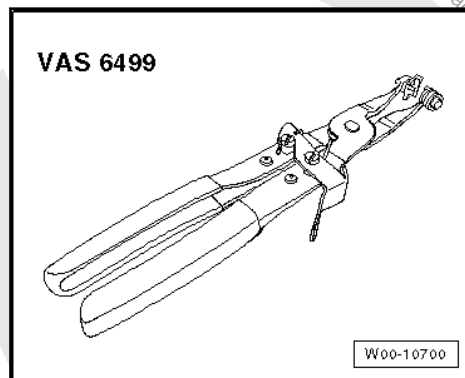
- Clean the air filter housing.
- Install the air filter and air filter housing in reverse order.



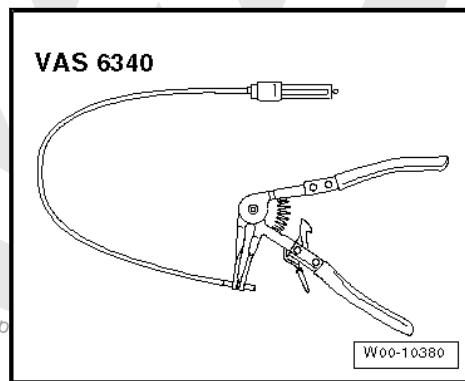
4.30.2 Air Filter Element, Removing and Installing, 1.4L TSI Hybrid Engine

Special tools and workshop equipment required

- ◆ Spring Clip Pliers -VAS 6499-

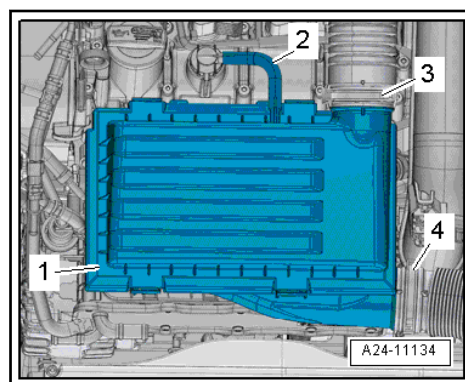


- ◆ Hose Clip Pliers -VAS 6340-

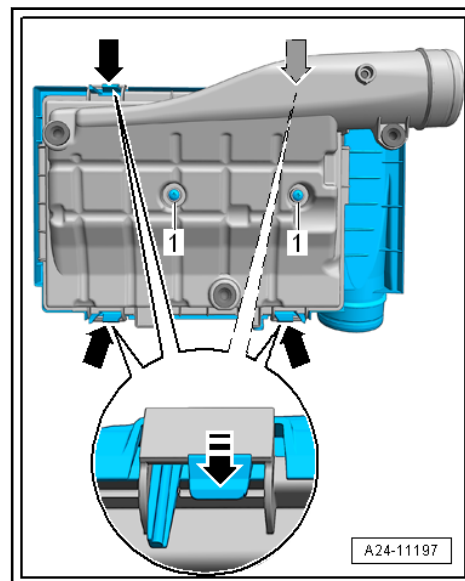


Removing

- Remove the upper engine cover. Refer to [⇒ C4.33 over Top, Removing and Installing](#), page 170 .
- Remove the air duct hose -2- from the air filter upper section -1-.



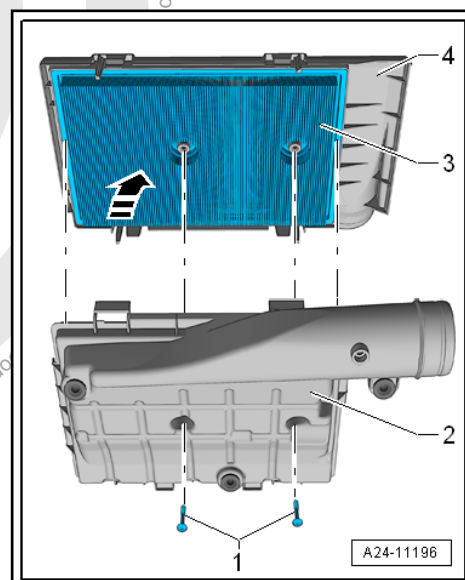
- Loosen the spring clamps -3- and -4- with the Spring Clip Pliers -VAS 6499- or Hose Clip Pliers -VAS 6340-.
- Pull the air filter housing -1- upward off the ball pins.
- Remove the air ducts from the air filter housing -1-.
- Remove the air filter housing -1- and lay it down turned 180°.
- Remove the bolts -1- from the air filter housing lower section.



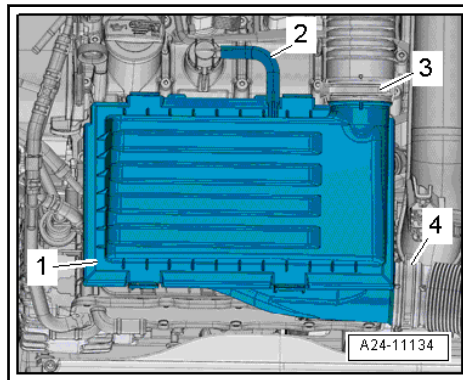
- Carefully release the tabs -arrows- on the air filter housing upper section one by one (danger of breaking).
- Remove the air filter housing lower section and the air filter element.

Installing

- Check the air filter housing, mass airflow sensor and water drains for contamination and clean if necessary.
- Insert the air filter element -3- centered into the mount in the air filter housing upper section -4-.



- Place the air filter housing lower section -2- on the air filter housing upper section -4- and tighten the bolts -1-.
- Mount the air ducts on the air filter housing -1-.

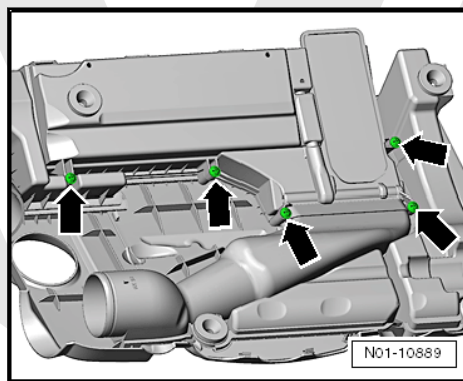


- Position the spring clamps -3- and -4- with the Spring Clip Pliers -VAS 6499- or Hose Clip Pliers -VAS 6340-.
- Position and firmly press the air filter housing -1- centered onto the ball pins.
- Attach the air guide hose -2- to the air filter housing upper section -1-.
- Install the upper engine cover. Refer to ➤ [C4.33 over Top, Removing and Installing](#), page 170 .

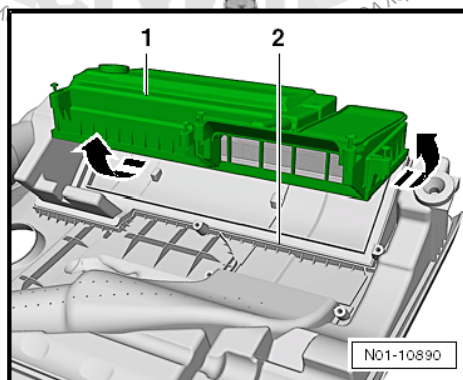
4.30.3 Air Filter Element, Removing and Installing, 2.5L SRE Gasoline Engines

Removing

- Remove the upper engine cover. Refer to ➤ [C4.33 over Top, Removing and Installing](#), page 170 .
- Place the top side of the engine cover on a soft surface to avoid damaging the housing.

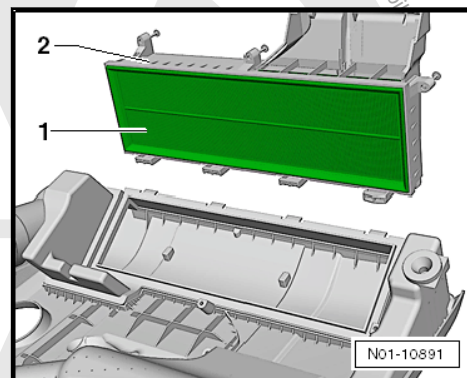


- Remove the screws -arrows- on the underside of the engine cover.





- Fold up the air filter lower section -1- in the direction of the arrow and remove it.



- Remove the air filter element -1- from the air filter lower section -2-.
- Blow out the air filter housing with compressed air, if necessary.

Installing

- Insert the air filter element -1- into the air filter lower section -2-.



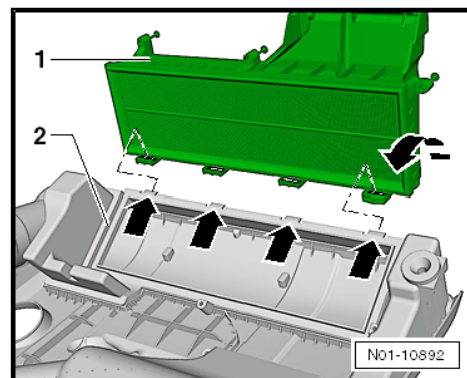
Note

Make sure the sealing surfaces on the air filter housing fit correctly.



Note

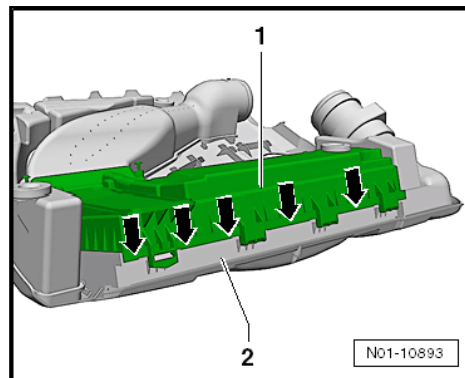
- ◆ *Standard self-tapping screws are used for fastening the air filter upper section to the air filter lower section as well as the intake tubes. If these screws are loosened or tightened using a drill, the threads in the air filter upper section can be damaged.*
- ◆ *For this reason, a drill may only be used when the following prerequisites are present:*
- ◆ *The drill speed must not exceed a maximum of 200 RPM.*
- ◆ *A tightening specification of maximum 2 Nm must be adjustable.*





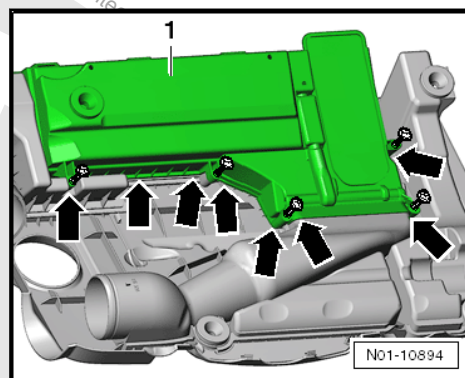
- Hook the air filter lower section -1- into the retaining tabs -arrows- of the air filter upper section -2-, pivot in the direction of arrow, and then press it on lightly.

Flush Dimension of Housing Halves -1- and -2-, Checking (Rear Part):

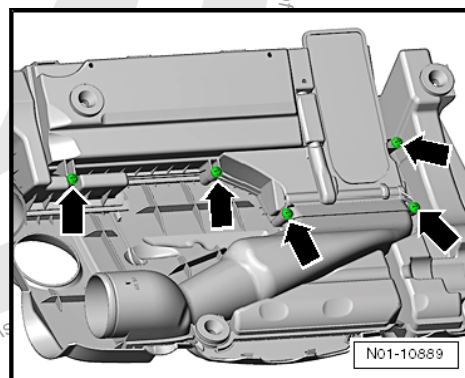


- Both housing halves must sit flush together, -arrows-.

Flush Dimension of Housing Halves -1- and -2-, Checking (Front Part):



- Both housing halves must sit flush together, -arrows-.



- Tighten the screws -arrows- to maximum 2 Nm.



Note

Tighten the bolts alternately and uniformly to prevent both housing halves from distorting.

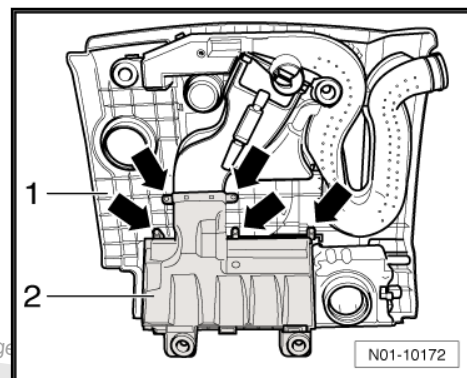
- Install the engine cover. Refer to [⇒ C4.33 over Top, Removing and Installing](#), page 170 .



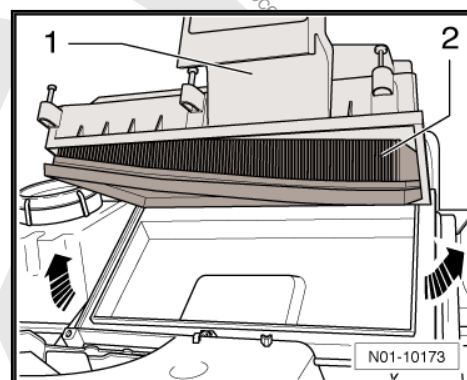
4.30.4 Air Filter Element, Removing and Installing, 1.6L SRE Gasoline Engines

Removing

- Remove the engine cover. Refer to ➤ [C4.33 over Top, Removing and Installing](#), page 170.
- Remove the screws -arrows-.



- Remove the air filter housing lower section -1- and the air filter element -2-.



Note

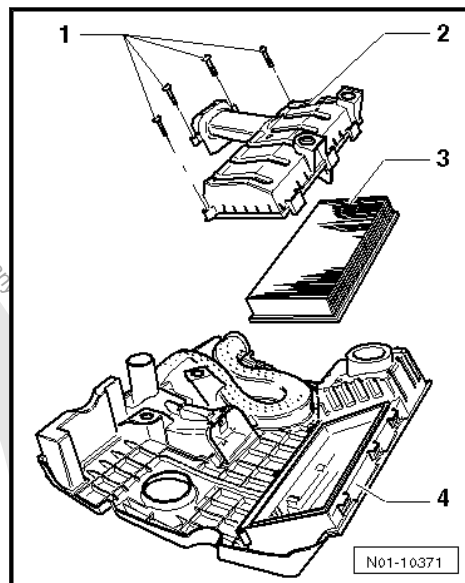
Please follow all waste disposal regulations!

- Clean the air filter housing lower section.

Installing

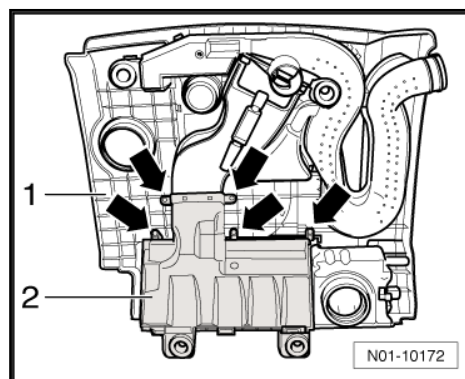
- Insert a new filter element -3- in the air filter housing lower section -2-.





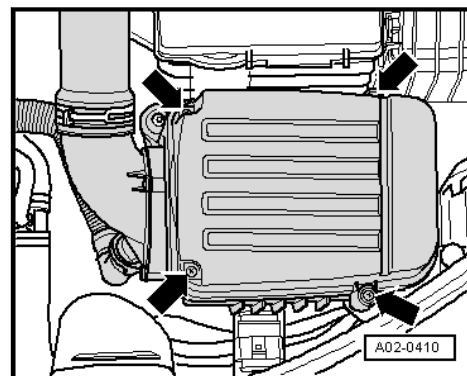
Note

- ◆ *Self-tapping screws are used as standard for fastening the air filter housing upper section to the air filter housing lower section as well as the intake tubes. If these screws are loosened or tightened using a drill, the threads in the air filter housing upper section can be damaged.*
- ◆ *For this reason, a drill may only be used when the following prerequisites are present:*
- ◆ *The drill speed must not exceed a maximum of 200 RPM.*
- ◆ *A tightening specification of maximum 3 Nm must be adjustable.*
- Mount the air filter housing lower section on the air filter housing upper section.
- Tighten the screws -arrows- to maximum 3 Nm.

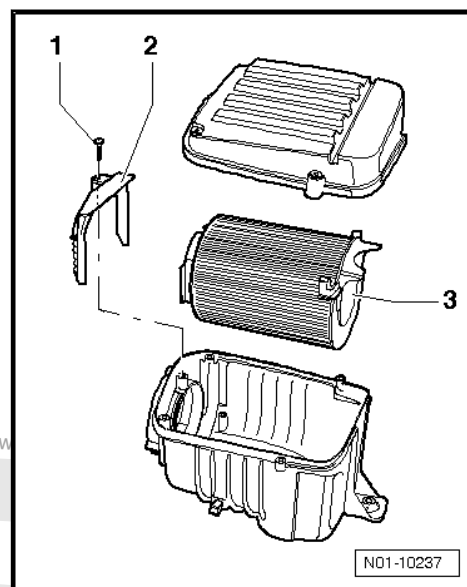


4.30.5 Air Filter Element, Removing and Installing, 2.0L FSI and 2.0L SRE Gasoline Engines

- Remove the four bolts -arrows- and the cover.



- Remove the bracket -2-.



- Remove the old filter element -3-.



Note

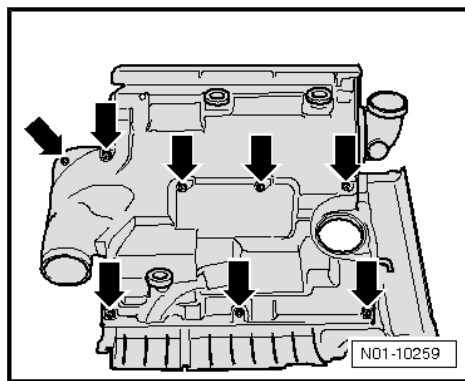
Please follow all waste disposal regulations!

- Clean the filter housing and install the new filter element.
- Tighten the bracket screw -1- to 2 Nm and the cover screws to 3 Nm.

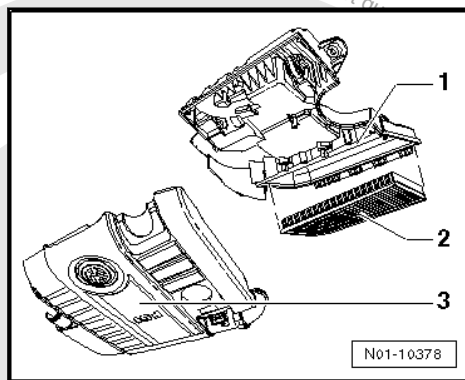
4.30.6 Air Filter Element, Removing and Installing, 2.0L TFSI Engines

Removing

- Remove the engine cover. Refer to ➤ [C4.33 over Top, Removing and Installing](#), page 170.
- Place the top side of the engine cover on a soft surface. Avoid damaging the chrome applications.



- Remove the screws -arrows- on the underside of the engine cover.
- Disconnect the air filter housing lower section -1- from the air filter housing upper section -3-.



- Remove the air filter element -2- from the air filter housing lower section -1-.

Installing

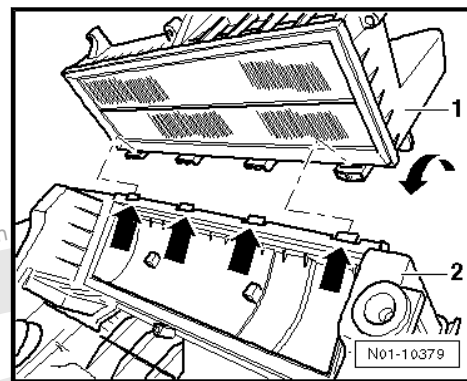


Note

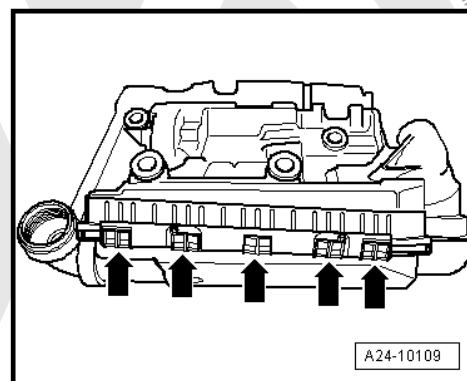
- ◆ *Self-tapping screws are used as standard for fastening the air filter housing upper section to the air filter housing lower section as well as the intake tubes. If these screws are loosened or tightened using a drill, the threads in the air filter housing upper section can be damaged.*
- ◆ *For this reason, a drill may only be used when the following prerequisites are present:*
- ◆ *The drill speed must not exceed a maximum of 200 RPM.*
- ◆ *A tightening specification of maximum 3 Nm must be adjustable.*

On the GTI edition 30 the rubber bushing must be removed from the engine cover. Refer to [⇒ C4.21 over Rubber Bushing, Replacing", page 132](#).

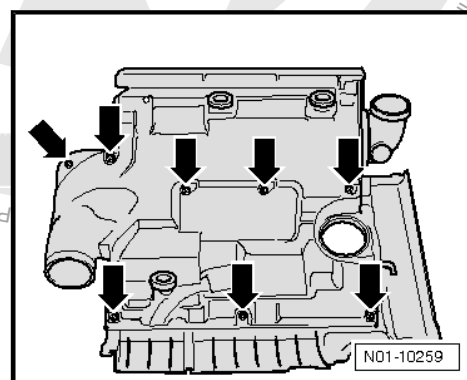
- Hook the air filter housing lower section -1- onto the retaining tabs -arrows- of the air filter housing upper section -2-, pivot in the direction of arrow, and then press it on lightly.



- Both housing halves must sit flush together -arrows-.

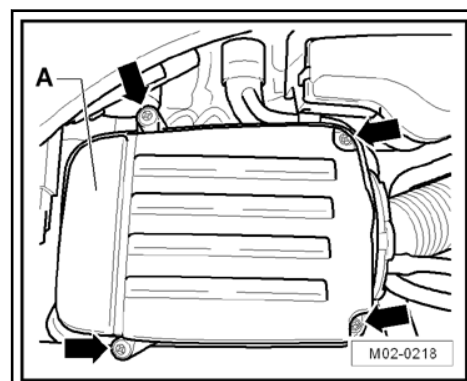


- Tighten the screws -arrows- to maximum 3 Nm.



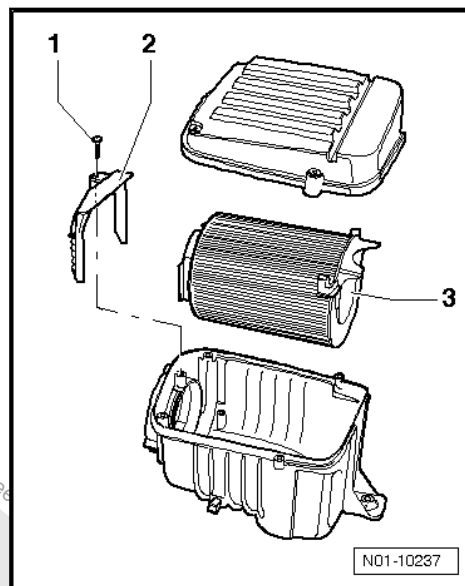
4.30.7 Air Filter Element, Removing and Installing, 1.4L TSI Engines (90 kW)

- Remove the four bolts -arrows- and the cover -A-.





- Remove the bracket -2-.



- Remove the old filter element -3-.



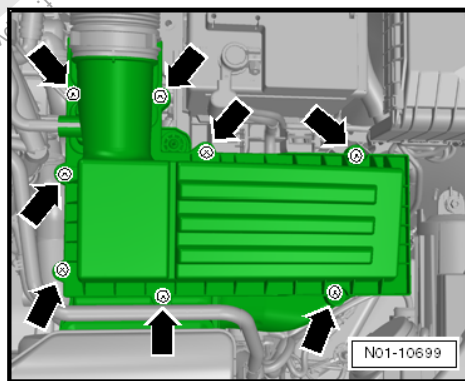
Note

Please follow all waste disposal regulations!

- Clean the filter housing and install the new filter element.
- Tighten the bracket screw -1- to 2 Nm and the cover screws to 3 Nm.

4.30.8 Air Filter Element, Removing and Installing, Diesel Engines and 1.4L TSI Engines (103 kW, 118 kW and 125 kW), 2.0L TSI Engines (155 kW)

- Remove the bolts -arrows-.



- Remove the vacuum hose from the air filter housing.

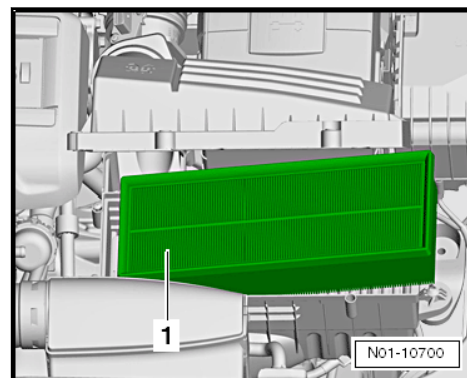


Caution

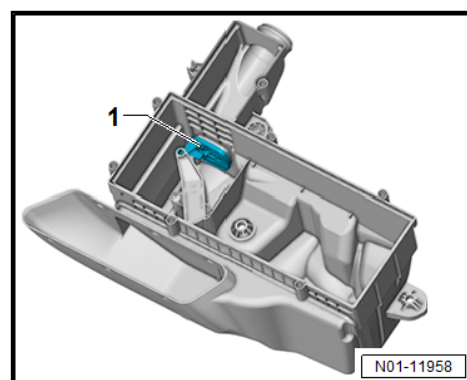
To avoid damage to connections and vacuum hose, do not use any sharp-edged tools to remove the hose.



- Remove the air filter upper section and take out the air filter element -1-.



Checking position of the warm air valve



- Check the position of the warm air valve -1- in the air filter lower section. At a temperature above +12 °C (53.6 °F) the warm air valve must be completely closed. Refer to ➔ Rep. Gr. 23; Air Filter; Checking Intake Air Pre-Heating Reversing Flap.



Note

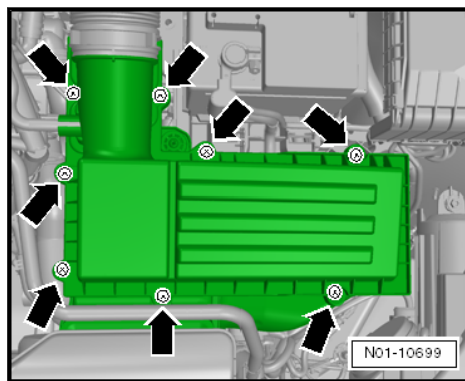
The snow screen and the warm air valve is not installed on all vehicles.



Note

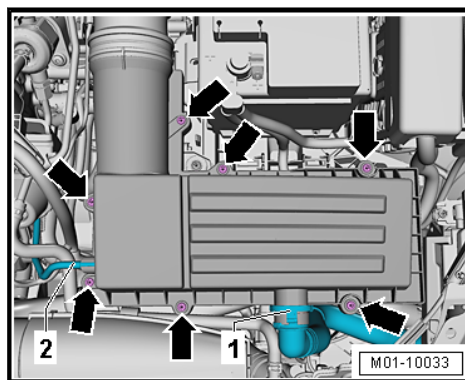
Please follow all waste disposal regulations!

- Clean the air filter lower section.
- Insert a new air filter element and attach the air filter upper section.
- Tighten the air filter upper section with the screws -arrows- to 1.6 Nm.



4.30.9 Air Filter Element, Removing and Installing, 1.8L TSI Engines

- Unlock and remove the secondary air line -1-.



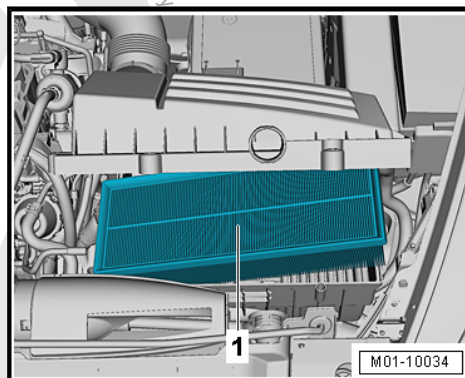
- Remove the vacuum hose -2-.
- Remove the bolts -arrows-.



Caution

To avoid damage to connections and vacuum hose, do not use any sharp-edged tools to remove the hose.

- Remove the air filter upper section and take out the air filter element -1-.

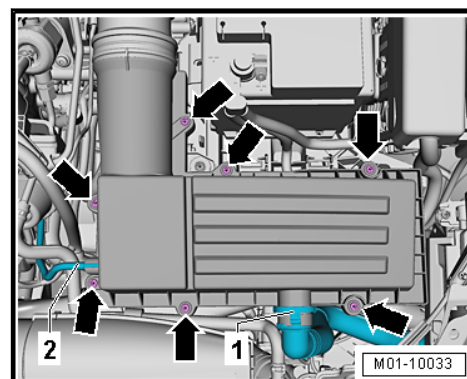




Note

Please follow all waste disposal regulations!

- Clean the air filter lower section.
- Insert a new air filter element and attach the air filter upper section.
- Tighten the air filter upper section with the screws -arrows- to 1.5 Nm.



- Connect the vacuum hose -2-.
- Connect the secondary air line -1-.

4.31 Memory Seat, Initializing

All memories and assignments are deleted during initialization. The memory buttons can then be newly programmed and a remote control key assigned.

- Open the driver door.
- Move the backrest all the way forward.
- Once the backrest is all the way forward, release the switch and press it again until the gong signal sounds after a few seconds.

4.32 Engine and Engine Compartment Components, Visually Inspecting for Leaks and Damage (from Above and Below)

- Remove the engine cover if necessary. Refer to [C4.33 over Top, Removing and Installing](#), page 170 :

Perform the visual inspection as follows:

- Check engine and components in engine compartment for leaks and damage.
- Check the lines, hoses and connections on the following systems:
 - ◆ Fuel system
 - ◆ Cooling and heating system
 - ◆ Oil circuit
 - ◆ A/C system
 - ◆ Air intake system



◆ Brake system

for leaks, abrasions, porosity and cracks.



Note

- ◆ *Make sure the all malfunctions detected are rectified within repair measures.*
- ◆ *Determine the cause of fluid loss, which cannot be attributed to normal use and repair.*

4.33 Engine Cover "Top", Removing and Installing

⇒ [C4.33.1 over, Removing and Installing, 1.4L SRE Gasoline Engines", page 171](#)

⇒ [C4.33.2 over, Removing and Installing, 1.4L TSI Engines \(90 kW\)", page 172](#)

⇒ [C4.33.3 over, Removing and Installing, 1.4L TSI Engines \(103 kW, 118 kW\)", page 172](#)

⇒ [C4.33.4 over, Removing and Installing, 1.4L TSI Hybrid Engine", page 173](#)

⇒ [C4.33.5 over, Removing and Installing, 1.6L FSI Engines", page 174](#)

⇒ [C4.33.6 over, Removing and Installing, 1.8L TSI and 2.0L TSI Gasoline Engines", page 175](#)

⇒ [C4.33.7 over, Removing and Installing, 2.0L TFSI Engines", page 175](#)

⇒ [C4.33.8 over, Removing and Installing, 2.0L FSI Engines", page 177](#)

⇒ [C4.33.9 over, Removing and Installing, 1.6L SRE Gasoline Engines", page 178](#)

⇒ [C4.33.10 over, Removing and Installing, 2.5L SRE Gasoline Engines", page 178](#)

⇒ [C4.33.11 over, Removing and Installing, 1.9L PD Diesel Engines", page 180](#)

⇒ [C4.33.12 over, Removing and Installing, 2.0L 103 kW PD Diesel Engines", page 181](#)

⇒ [C4.33.13 over, Removing and Installing, 2.0L CD Diesel Engines", page 182](#)

⇒ [C4.33.14 over, Removing and Installing, 2.0L 125 kW PD Diesel Engines", page 183](#)

⇒ [C4.33.15 over, Removing and Installing, 1.8L \(125 kW\) and 2.0L \(155 kW\) TSI Engine", page 184](#)



Caution

- ◆ *Be sure to not strike the engine cover with a fist or a tool when installing it and engaging the fastening points. There is a risk of damage.*



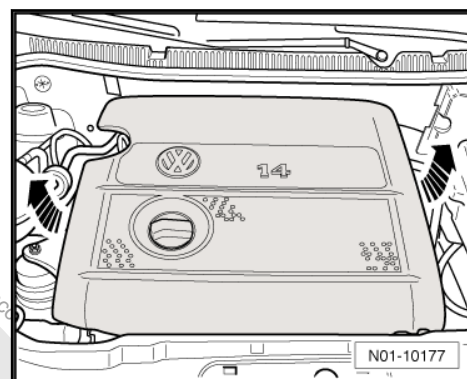
4.33.1 Engine Cover, Removing and Installing, 1.4L SRE Gasoline Engines

- There are two different types of engine covers.
- ◆ Engine cover type 1: air filter housing is integrated in the engine cover. Refer to [⇒ page 171](#).
- ◆ Engine Cover Version 2: engine cover on the engine. Refer to [⇒ page 171](#).

Engine Cover, Version 1

Removing

- Remove the hose from the oil separator or check valve from the air filter housing upper section.



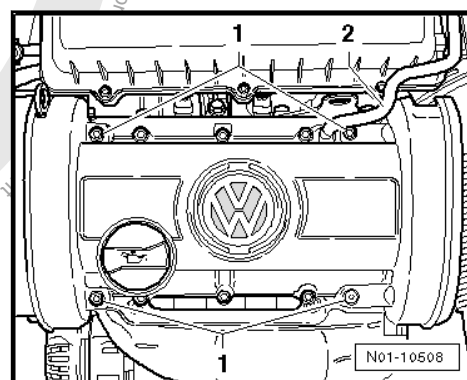
- Disengage the engine cover -arrows- from the throttle valve control module and remove upward.

Installing

- Place the engine cover on the throttle valve control module and on the mounting point and push in so that it engages.
- Connect the hose from the oil separator or check valve from the air filter housing upper section.

Engine Cover, Version 2

- Carefully remove the hose -2-.



- Loosen the four bolts -1- and remove the cover.
- Installation is reverse of removal.

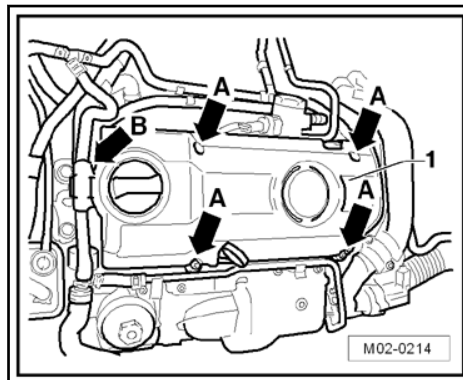
Bolt tightening specification: 10 Nm



4.33.2 Engine Cover, Removing and Installing, 1.4L TSI Engines (90 kW)

Removing

- Pull the hose from the retainer -arrow B-.



- Loosen the engine cover -1- from the mounting point -A arrows- and remove.

Installing

- Install the engine cover and bolts -arrows- and tighten to 10 Nm.
- Insert the hose in the bracket -arrow B-.

4.33.3 Engine Cover, Removing and Installing, 1.4L TSI Engines (103 kW, 118 kW)

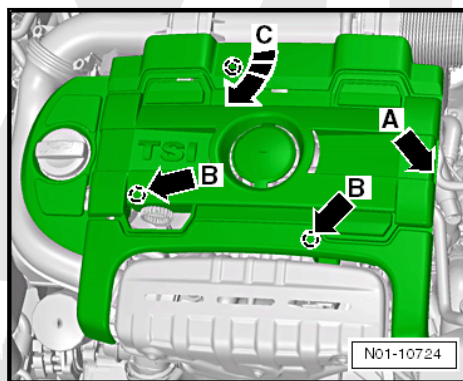
Removing



Caution

To avoid damage to connections and vacuum hose, do not use any sharp-edged tools to remove the hose.

- Remove the hose from the support -arrow A-.

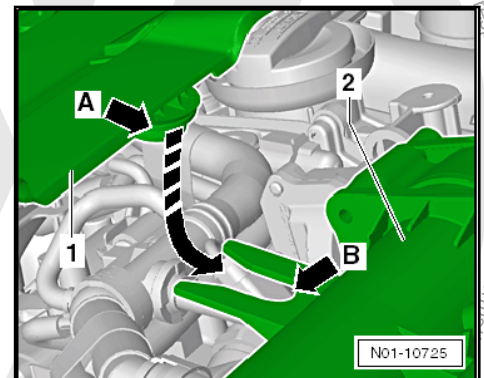


- Disengage the engine cover at the mounting points -B arrows- and lift.
- Then remove from retainer -arrow C-.

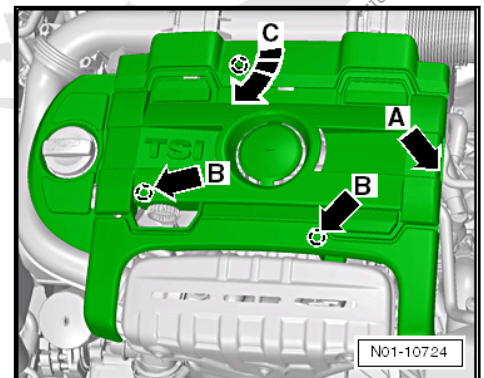


Installing

- Slide the engine cover -1- with the tab -arrow A- at the mounting point -2- into the bracket -arrow B-.



- Then place the engine cover on the other mounting points -B arrows- and press on until it noticeably engages.

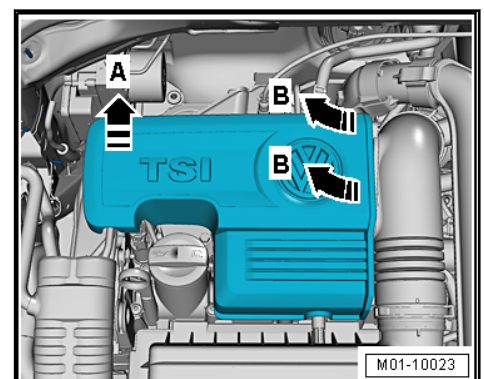


- Insert the hose in the support -arrow A-.

4.33.4 Engine Cover, Removing and Installing, 1.4L TSI Hybrid Engine

Removing

- Remove the engine cover upward -arrow A- and in the direction of the arrow -B arrows-.



Installing



Note

To avoid damage, do not hit the engine cover with fist or a tool.

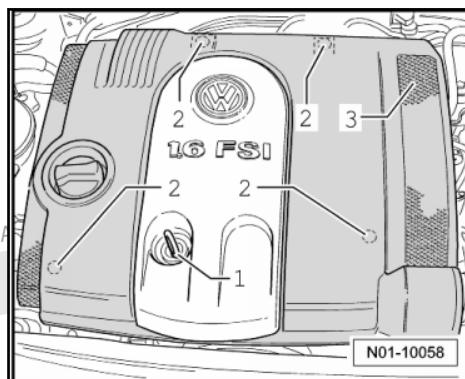


- Install in reverse order of removal.

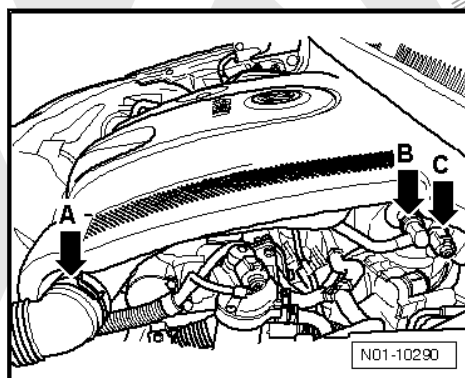
4.33.5 Engine Cover, Removing and Installing, 1.6L FSI Engines

Removing

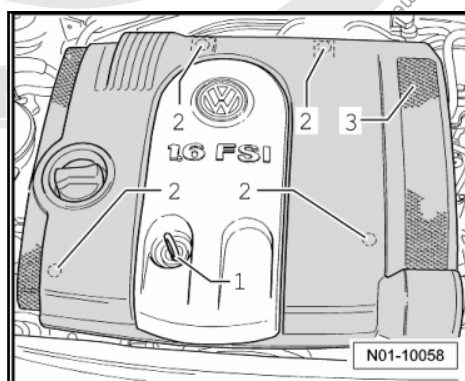
- Remove the oil dipstick -1-.



- Remove the connector -C- and hose connection -B-.

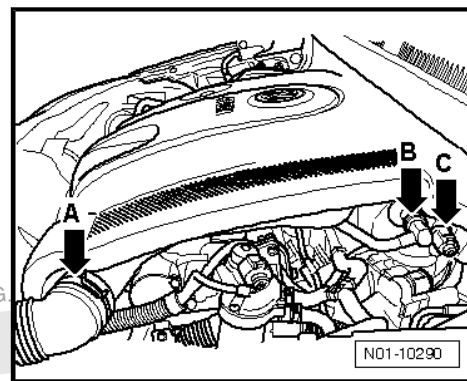


- Loosen the clamp -A- and remove the hose.
- Disengage the engine cover on the mounting points -2- and remove it upward.

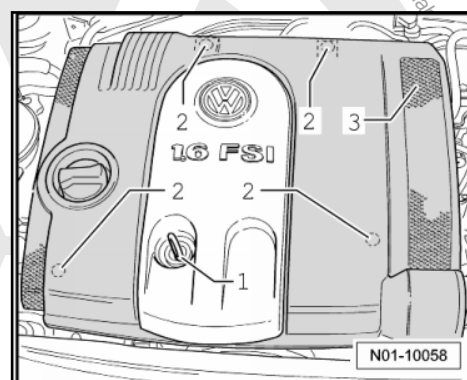


Installing

- Set the engine cover on the mounting points -2- and press it on so that it engages.



- Attach the connector -C- and hose connection -B-.
- Attach the hose and tighten the clamp -A-.

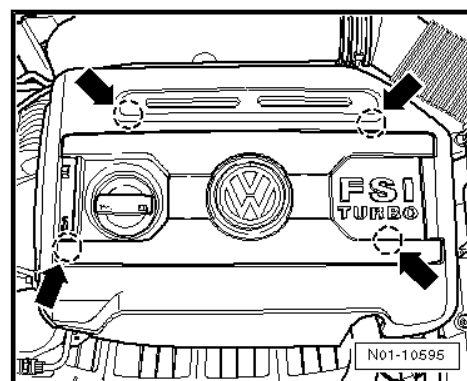


- Insert the oil dipstick -1- into the guide tube.

4.33.6 Engine Cover, Removing and Installing, 1.8L TSI and 2.0L TSI Gasoline Engines

Removing

- Disengage the engine cover at the mounting points -arrows- and remove it upward.



Installing

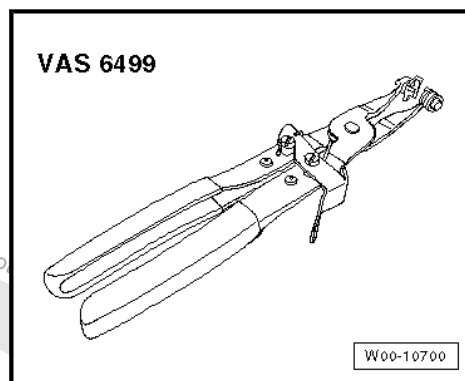
- Set the engine cover onto the mounting points -arrows- and press it on, until it engages.

4.33.7 Engine Cover, Removing and Installing, 2.0L TFSI Engines

Special tools and workshop equipment required

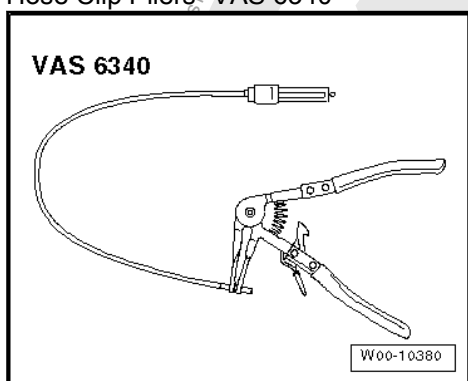


◆ Spring Clip Pliers -VAS 6499-



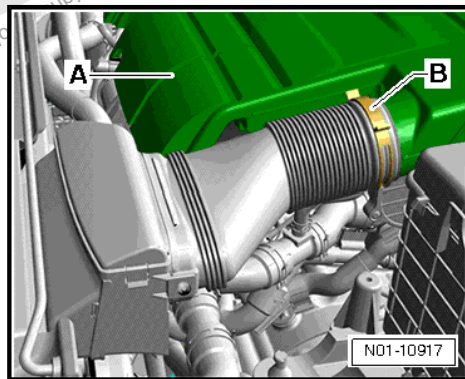
Or

◆ Hose Clip Pliers -VAS 6340-

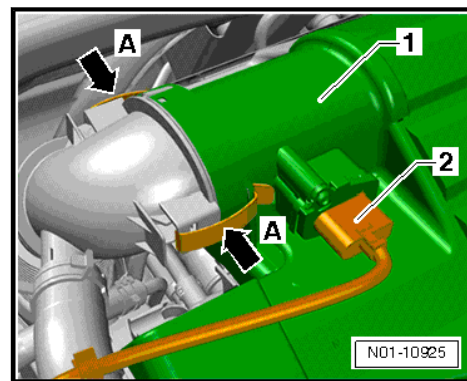


Removing

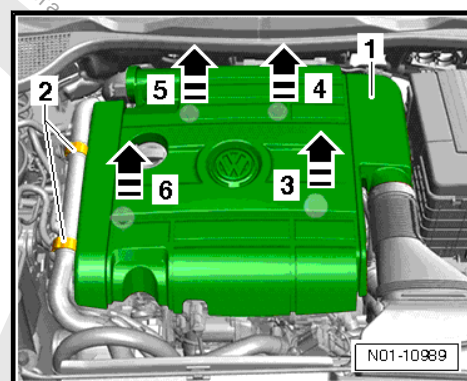
- Release the pressure on the spring clamp -B- using the Spring Clip Pliers -VAS 6499- or Hose Clip Pliers -VAS 6340- and remove the air intake from the engine cover -A-.



- Remove the connector -2- from the Mass Airflow Sensor -G70- and move it to the side.
- Open both clips -arrows A- from the engine cover -1-.



- Unclip the hose at the fastener -2- from the engine cover -1-.
- Detach the engine cover at the mounting points -arrow 3-; -arrow 4-; -arrow 5- one after the other and then at mounting point -arrow 6-. Then lift the engine cover.



Installing



Note

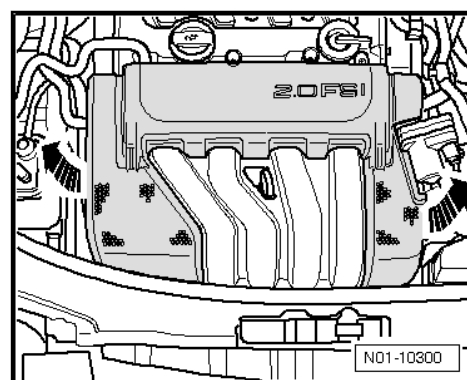
Do not grease or lubricate the rubber buffers and the engine cover guides before installing.

- Install in reverse order of removal.

4.33.8 Engine Cover, Removing and Installing, 2.0L FSI Engines

Removing

- Unclip the engine cover at the mounting points -arrows- and remove it upward.





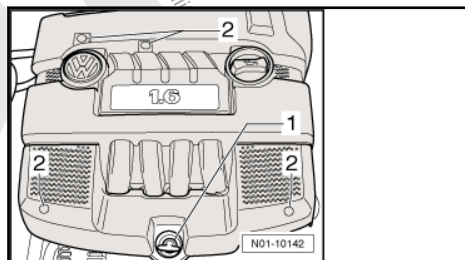
Installing

- Install in reverse order of removal.

4.33.9 Engine Cover, Removing and Installing, 1.6L SRE Gasoline Engines

Removing

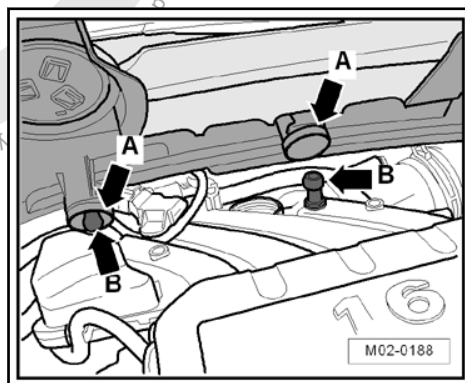
- Remove the oil dipstick -1-.



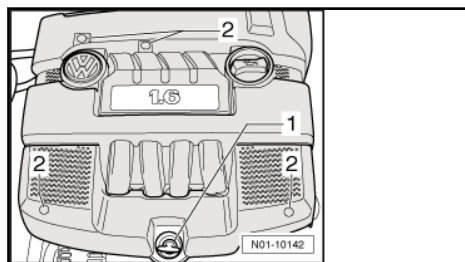
- Unclip the engine cover at the mounting points -2- and remove it upward.

Installing

- First position the engine cover -A arrows- on the retaining pins -B arrows-



- Then position it on the other mounting points -2- and press on it until it can be felt engage.

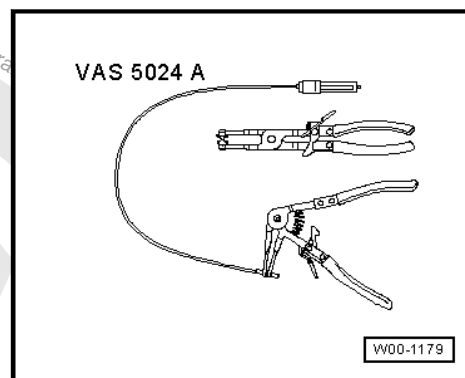


4.33.10 Engine Cover, Removing and Installing, 2.5L SRE Gasoline Engines

Special tools and workshop equipment required

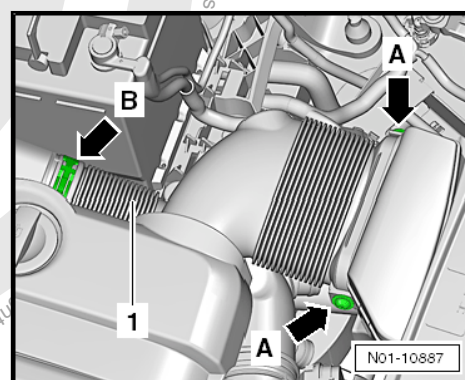


◆ Hose Clip Pliers -VAS 5024A-

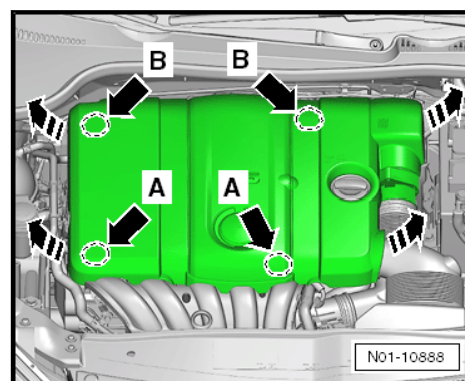


Removing

- Remove the bolts on the air intake -arrow A-.



- Release the tension on the mass airflow sensor clamps -arrow B- using the Hose Clip Pliers -VAS 5024A- and then slide them back.
- Remove the air guides -1-.
- Loosen the engine cover from the mounting points -A arrows-.



- Lift the engine cover at the front.
- Loosen the engine cover from the mounting points -B arrows-.
- Remove the engine cover upward.

Installing

- Position and firmly press the engine cover onto the rear mounting points -B arrows-.
- Then firmly press the engine cover onto the front mounting points -A arrows-.



Note

Carefully press the engine cover onto the fastening points by hand until it noticeably engages.

- Installation is the reverse of removal.

4.33.11 Engine Cover, Removing and Installing, 1.9L PD Diesel Engines



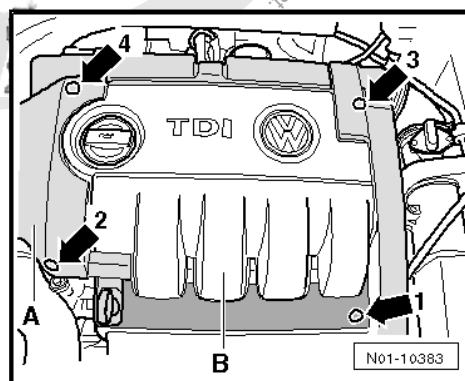
Note

The engine cover is made up of two individual parts.

- ◆ 1. The outer part is shaded in the illustration.
- ◆ 2. The center part is not shaded in the illustration.

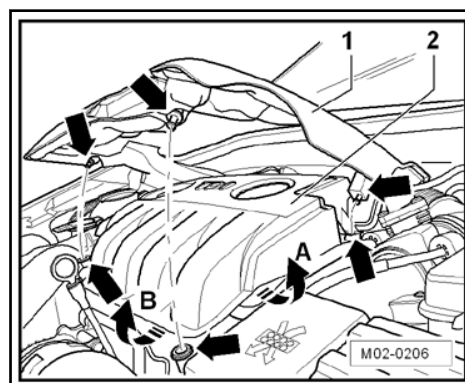
Removing

- Carefully disengage and lift the engine cover at the individual mounting points in the following order.



- ◆ -1-, -3-, -2-, -4-.

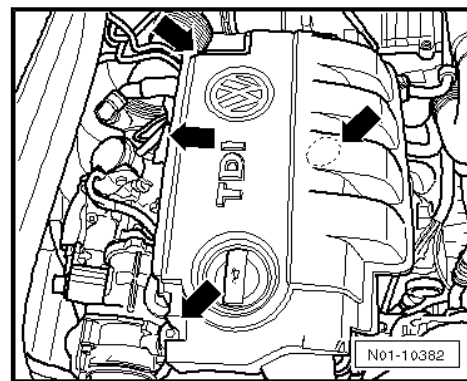
- Remove the outer section -1-.



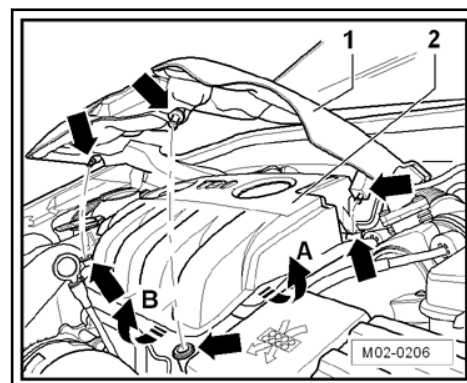
- Carefully release the center section -2- and raise slightly.

Installing

- Position the engine cover on the mounting points -arrows- and press it on.



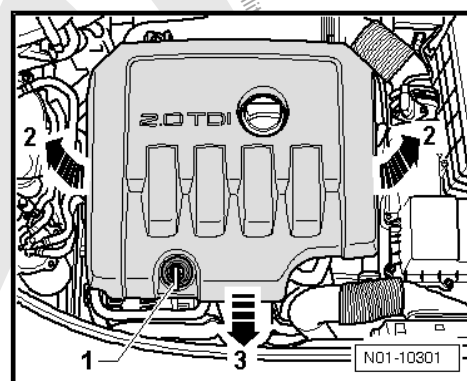
- The place the outer panel -1- on the mounting points -arrows- and push on.



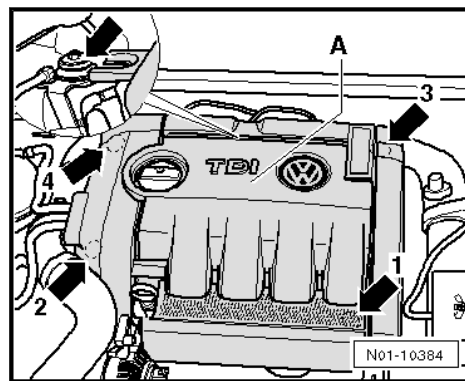
4.33.12 Engine Cover, Removing and Installing, 2.0L 103 kW PD Diesel Engines

Removing

- Remove the oil dipstick -1-.



- Disengage and lift the engine cover -arrow 2-.
- Remove toward the front -upper arrow in the image-.



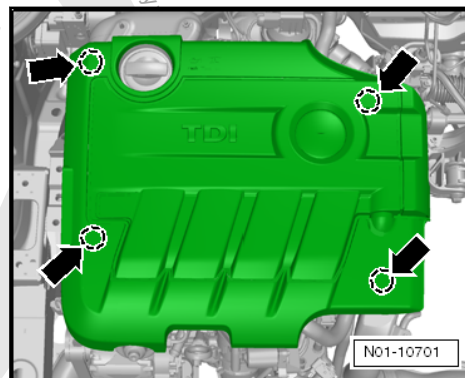
Installing

- Insert the engine cover -A- first in the mounting point -upper arrow in the image-.
- Then place the engine cover -A- on the other mounting points arrows -1 through 4- and push in until it noticeably engages.

4.33.13 Engine Cover, Removing and Installing, 2.0L CD Diesel Engines

Removing

- Loosen and lift the engine cover off of the mounting points -arrow-.



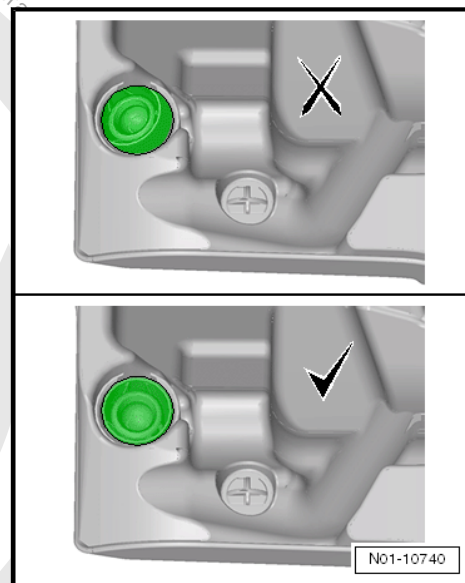
Installing



Caution

Make sure the four fastening elements (ball sockets) are positioned correctly before installing the engine cover. Adjust their position if necessary. Otherwise the engine cover will get damaged.

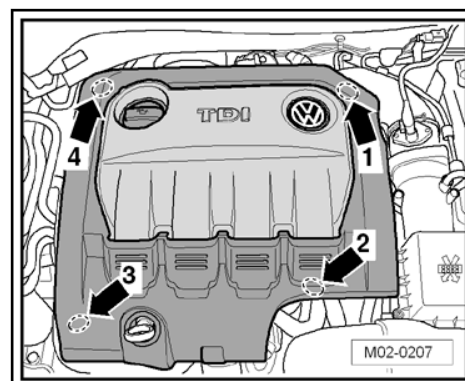
- If necessary, push the ball sockets on the engine cover into the correct position.



- Position the engine cover on the mounting points and press the corners in the catch.

4.33.14 Engine Cover, Removing and Installing, 2.0L 125 kW PD Diesel Engines

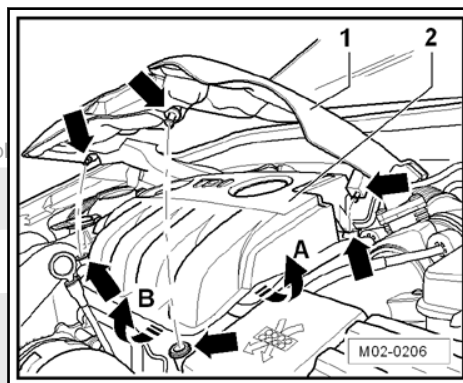
Removing



Note

The engine cover is made up of two individual parts.

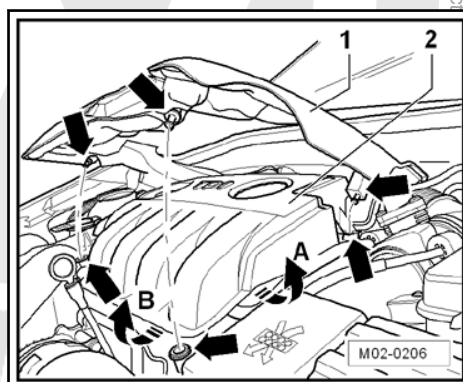
- ◆ 1. The outer part, shown “darkly” shaded in the illustration.
- ◆ 2. The center part, shown “lightly” shaded in the illustration.
- Carefully disengage and lift the engine cover at the individual mounting points in the following order.



- Remove the outer section -1-.
- Carefully release the center section -2- and raise slightly.

Installing

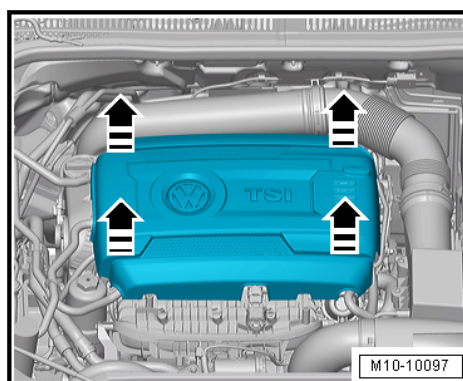
- First place the center section -2- on the mounting point and push on.



- The place the outer panel -1- on the mounting points -arrows- and push on.

4.33.15 Engine Cover, Removing and Installing, 1.8L (125 kW) and 2.0L (155 kW) TSI Engine

Removing



- Carefully pull the engine cover off of the retaining pins -arrows- one after the other.



Note

Do not pull on the engine cover abruptly to remove it or pull on one side.

Installing

- Position the engine cover.
- Press the engine cover first in the rubber grommets on the left side and then in the rubber grommets on the right side.



Note

To avoid damage, do not hit the engine cover with fist or a tool.

4.34 “Lower” Engine Compartment Cover (Noise Insulation), Removing and Installing

⇒ [E4.34.1 Engine Compartment Cover, Removing And Installing, Version 1 \(Large Noise Insulation\)”, page 185](#)

⇒ [E4.34.2 Engine Compartment Cover, Removing and Installing, Version 2 \(Small Noise Insulation\)”, page 186](#)

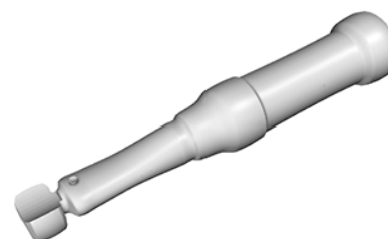
4.34.1 “Lower” Engine Compartment Cover, Removing And Installing, Version 1 (Large Noise Insulation)

Special tools and workshop equipment required

- ◆ Torque Wrench 1783 - 2-10Nm -V.A.G 1783-

- ◆ 12V / 2 Ah Cordless Drill -VAS 5826-

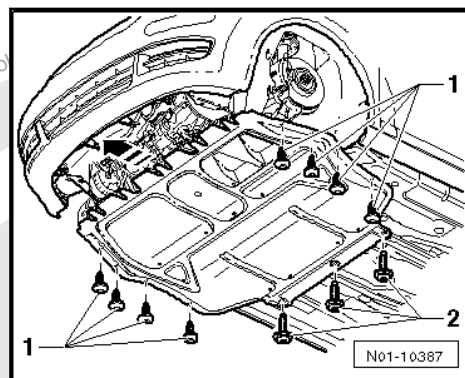
V.A.G 1783



W00-0990

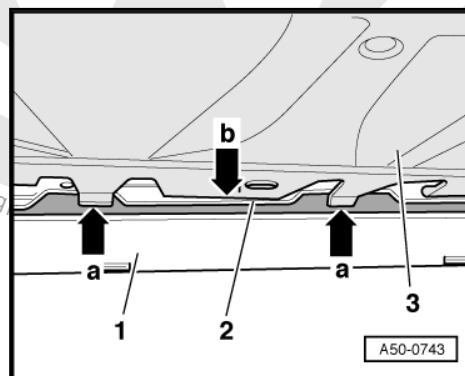


Removing



- 1 - Bolts, Quantity 8, Tightening Specification 2 Nm.
- 2 - Combi bolt, the bolts are microencapsulated and must always be replaced after loosening, quantity 3, tightening specification 6 Nm.
- Remove the bolts -arrows-.
- Remove the noise insulation.

Installing



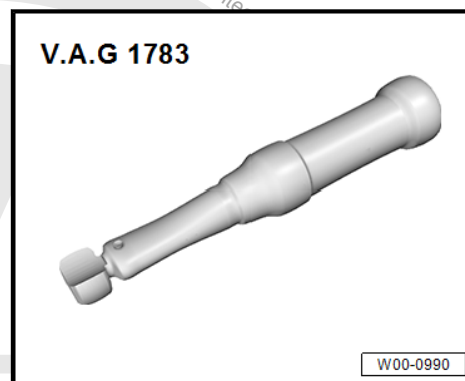
- Insert the noise insulation -3- as shown into the bottom of the lock carrier -2-.
- The narrow tabs -arrow a- must be inserted below the edge for the lock carrier, and the wide tabs -arrow b- must be inserted above the edge for the lock carrier -2-.
- The locking tabs on the wide tabs must engage into the lock carrier holes while doing so.
- Tighten the bolts -arrows- to the tightening specification.

4.34.2 “Lower” Engine Compartment Cover, Removing and Installing, Version 2 (Small Noise Insulation)

Special tools and workshop equipment required

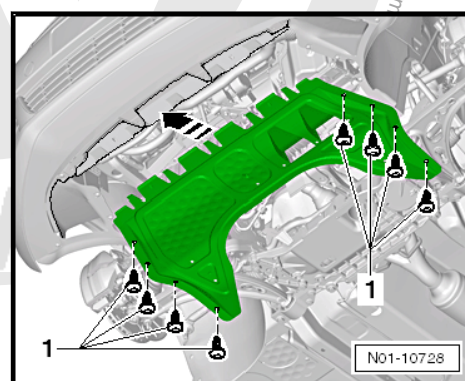


- ◆ Torque Wrench 1783 - 2-10Nm -V.A.G. 1783-



- ◆ 12V / 2 Ah Cordless Drill -VAS 5826-

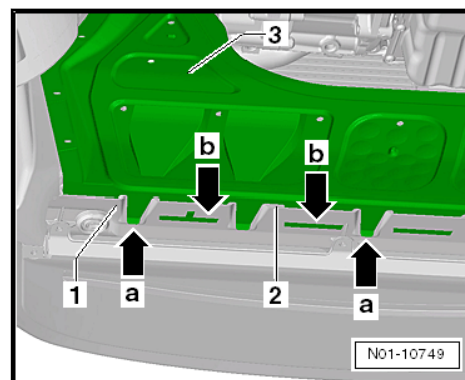
Removing



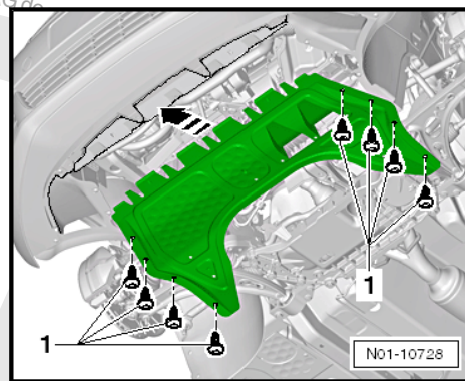
- 1 - Screws, Tightening Specification, 2 Nm.

- Remove the bolts -arrows- with the Torque Wrench VAS 5820 (20-100 Nm) -VAS 5826-.
- Remove the noise insulation.

Installing



- Insert the noise insulation -3- as shown into the bottom of the lock carrier -2-.
- The narrow tabs -arrow a- must be inserted below the edge for the lock carrier, and the wide tabs -arrow b- must be inserted above the edge for the lock carrier -2-.
- The locking tabs on the wide tabs must engage into the lock carrier holes while doing so.
- Tighten the bolts -arrows- to the tightening specification.



4.35 Engine Oil Level, Checking

Pay attention to the following:

- After turning off the engine, wait at least three minutes for the oil to flow back into the oil pan.
- Pull out the oil dipstick and wipe it with clean cloth. Insert the dipstick and push it all the way down.
- Pull out the dipstick again and read the oil level.

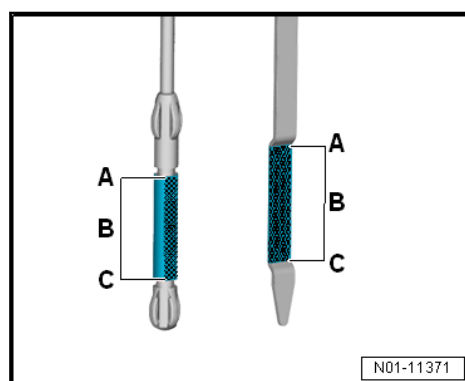
Only applies to engine codes: **CNLA** and **CRJA**



Note

- ♦ *The oil level must be at least in the upper third of the measuring field -B- during the pre-delivery inspection. So that the highest customer satisfaction can be reached.*
- ♦ *The amount of oil used during an engine oil change from the service table is determined by trial, and is sufficient for the engine operation in all operating conditions. For all services the oil level must be adjusted if necessary if the customer requests it. This makes an additional filling possible to the specified oil change amount to the maximum limit on the dipstick. Due to tolerances and also to oil temperature and flow back time, different fill capacities are possible.*

Markings on the oil dipstick:



A - Do not add oil.

B - The oil can be filled to the maximum limit -A-.

C - Add oil. The oil level must be at least in the upper half of the measuring range -B-.



- Drain or extract some of the oil if the oil level goes above the maximum limit -A- to prevent damage to the catalytic converter.
- If the oil level is under the minimum mark -C- fill the oil, minimum of 0.5 liters. Refer to [T2.2 ables for Market Designation A", page 20](#) for the oil specification.

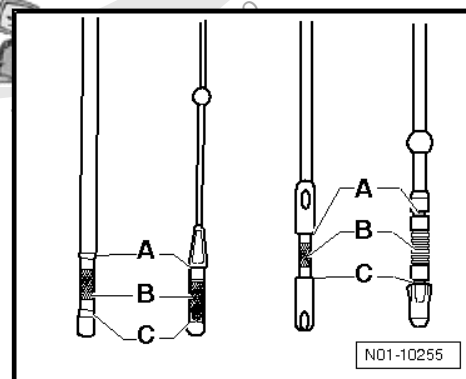
Applies to all other engine codes:



Note

- ◆ *The oil level must always be in the A range at the pre-delivery inspection. So that the highest customer satisfaction can be reached.*
- ◆ *The amount of oil used during an engine oil change from the service table is determined by trial, and is sufficient for the engine operation in all operating conditions. For all services the oil level must be adjusted if necessary if the customer requests it. This makes an additional filling possible to the specified oil change amount up to the maximum limit on the oil dipstick. Due to tolerances and also to oil temperature and flow back time, different fill capacities are possible.*

Markings on the oil dipstick:



A - Do not add oil.

B - Engine oil can be filled up to the -A- range.

C - Add oil. The oil level must be at least in the upper half of the measuring range -B-.

- Drain or extract some of the oil if the oil level goes above the -A- mark to prevent damage to the catalytic converter.
- If the oil level is under the -C- mark fill the oil, minimum of 0.5 liters. Oil specification. Refer to [T2.2 ables for Market Designation A", page 20](#).



4.36 Engine Oil, Draining or Extracting, Replacing Oil Filter and Filling Engine Oil

- ⇒ [F4.36.1 or Engines with Turbochargers", page 190](#)
- ⇒ [O4.36.2 il, Draining or Extracting", page 191](#)
- ⇒ [F4.36.3 ilter, Replacing, 1.4L SRE Gasoline Engines", page 192](#)
- ⇒ [F4.36.4 ilter, Replacing, 1.4L TSI Engines \(90 kW\)", page 193](#)
- ⇒ [F4.36.5 ilter, Replacing, 1.4L TSI Engines \(104 kW, 125 kW\) and 1.3L TSI Engines", page 194](#)
- ⇒ [F4.36.6 ilter, Replacing, 1.4L TSI Engines \(118 kW\)", page 196](#)
- ⇒ [F4.36.7 ilter, Replacing, 1.4L TSI Hybrid Engine", page 197](#)
- ⇒ [F4.36.8 ilter, Replacing, 1.6L and 2.0L SRE Engines", page 200](#)
- ⇒ [F4.36.9 ilter, Replacing, 1.6L FSI Engines", page 201](#)
- ⇒ [F4.36.10 ilter, Replacing, 2.0L TSI Engines", page 203](#)
- ⇒ [F4.36.11 ilter, Replacing, 2.0L FSI and TFSI Engines, 2.5L SRE Gasoline Engines", page 204](#)
- ⇒ [F4.36.12 ilter, Replacing, PD Diesel Engines", page 209](#)
- ⇒ [F4.36.13 ilter, Replacing TDI CR", page 211](#)
- ⇒ [F4.36.14 ilter, Replacing, 1.8L \(125 kW\) and 2.0L \(155 kW\) TSI Engine", page 212](#)
- ⇒ [O4.36.15 il, Filling", page 214](#)

4.36.1 Information for Engines with Turbochargers

After the engine and oil filters have been replaced, pay attention to the following after the engine has been started for the first time:

- ◆ As long as the oil pressure indicator lamp in the instrument cluster is on, the engine may only run in idle.
- ◆ Do not touch the accelerator pedal!
- ◆ When the warning light extinguishes, the full oil pressure is achieved and the engine can be accelerated.



Caution

Bumping the accelerator pedal can damage the turbocharger or destroy it completely. Since the turbocharger operates at high speeds, the bearing can become destroyed within seconds if it is not lubricated sufficiently.

If any oil leaks, vibrations or unnatural sounds coming from the turbocharger are detected, switch off the engine immediately.

4.36.2 Engine Oil, Draining or Extracting



Caution

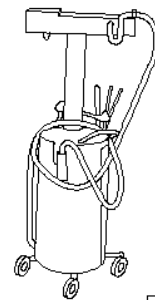
- ◆ *On hybrid vehicles visually inspect the hybrid components in the work area. Refer to ➤ [C4.23 omponents, Visually Inspecting for Damage of the High-Voltage Components and Wires](#), page 137.*
- ◆ *Contact to the responsible high-voltage technician or expert if something needs clarification.*
- ◆ *On engines with standing oil filter module, the oil filter should be changed before the oil change. Refer to ➤ [F4.36.5 ilter, Replacing, 1.4L TSI Engines \(104 kW, 125 kW\) and 1.3L TSI Engines](#), page 194, and Refer to ➤ [F4.36.12 ilter, Replacing, PD Diesel Engines](#), page 209. Removing the filter element will open a valve and oil in the filter housing will flow automatically into the crankshaft housing.*
- ◆ *The oil drain plug has a permanent gasket. Always replace the oil drain plug.*

Special tools and workshop equipment required

- ◆ Used Oil Collection and Extraction Unit -SMN372500-



V.A.G 1782



W00-10211

- ◆ Oil Absorbent Towel -VAS 6204/1-

Engine Oil, Draining or Extracting:

Perform the following procedure:

- Extract the engine oil using the Used Oil Collection and Extraction Unit -SMN372500-.

Or

- Remove the oil drain plug.
- Let the engine oil drain.
- Install the new oil drain plug and seal hand-tight and then tighten to the specified tightening specification.
- Fill the engine oil. Correct oil specification. Refer to ➤ [T2.2 ables for Market Designation A](#), page 20.

Engine oil capacity. Refer to »Powertrain« Rep. Gr. 17 »Engine Oil« or in »Maintenance Table«.

Oil Drain Plug Tightening Specifications:

- ◆ Gasoline engines: 30 Nm
- ◆ Diesel engines: 30 Nm



WARNING

- ◆ *Do not exceed the tightening specifications.*
- ◆ *A too high of torque may lead to leaks near the oil drain plug or even damage.*

4.36.3 Oil Filter, Replacing, 1.4L SRE Gasoline Engines

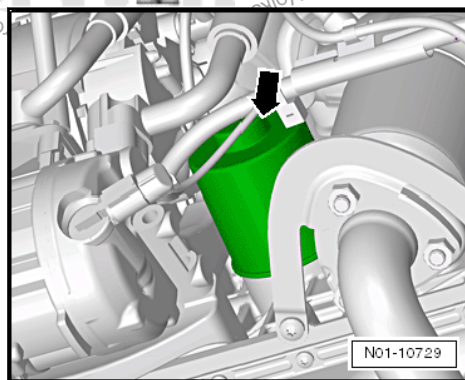
Removing

- Remove the “lower” engine compartment cover (noise insulation). Refer to ➤ [E4.34 Engine Compartment Cover \(Noise Insulation\), Removing and Installing, page 185](#).



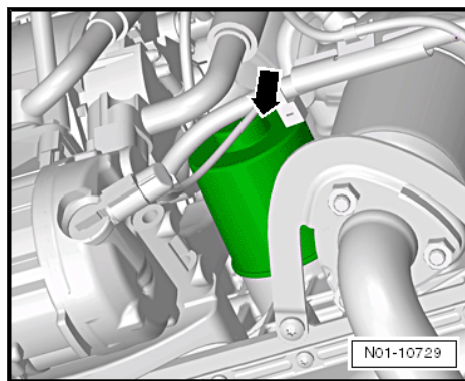
Note

- ◆ *Please follow all waste disposal regulations!*
- ◆ *Coat the new O-rings with oil before installing them.*
- ◆ *Do not let any engine oil drip onto the components in the engine compartment.*
- Remove the oil filter -arrow-, for example, with a 30 mm Wrench -VAS 5399- or a Double Closed End Wrench 30x32 mm -VAS 5410-.



- Clean the sealing surface on the engine.

Installing



- Lightly coat the oil filter seal with oil.
- Screw in filter and tighten hand-tight.



Install in reverse order of removal.

4.36.4 Oil Filter, Replacing, 1.4L TSI Engines (90 kW)



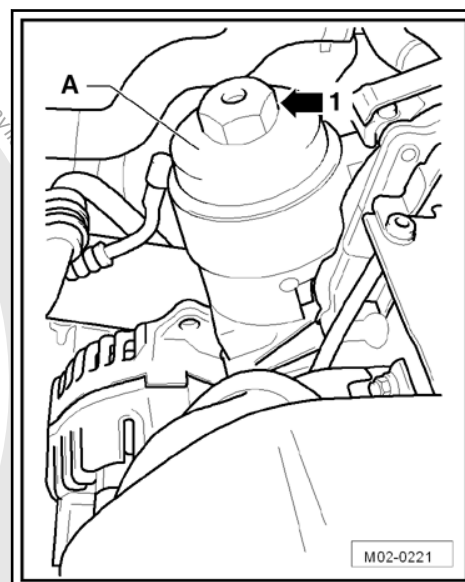
Note

- ◆ Please follow all waste disposal regulations!
- ◆ Coat the new O-rings with oil before installing them.
- ◆ Do not allow engine oil to drip onto vehicle parts.

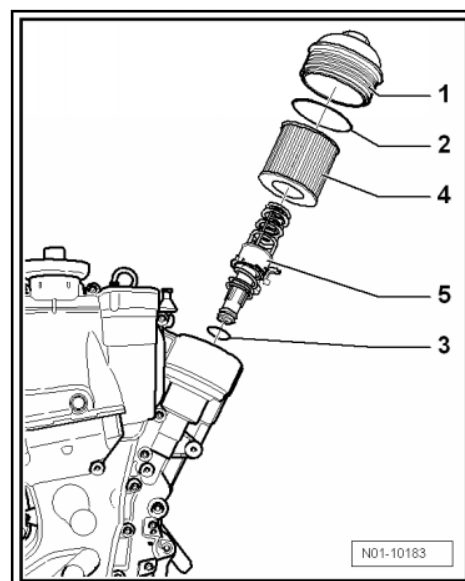
Removing

Remove the engine cover. Refer to [⇒ C4.33 over Top, Removing and Installing](#), page 170.

- Loosen the oil filter cover -A- for example with a 36 mm socket on the hex fitting -arrow- and remove.



- Remove the oil filter cover -1-, the oil filter -4- and the valve -5-.





Installing

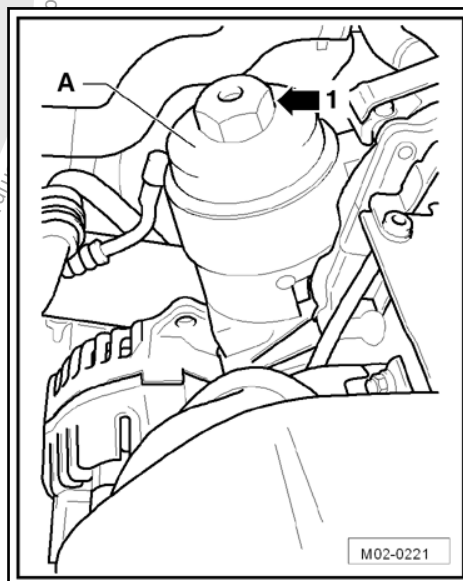
- Remove the O-ring -2- from the oil filter cover and the O-ring -3- from the valve.
- Replace the old oil filter with a new one -4-.



Note

Please follow all waste disposal regulations!

- Tighten oil filter cover -A- to 25 Nm.



Install in reverse order of removal.

4.36.5 Oil Filter, Replacing, 1.4L TSI Engines (104 kW, 125 kW) and 1.3L TSI Engines



Note

- ◆ *Please follow all waste disposal regulations!*
- ◆ *Coat the new O-rings with oil before installing them.*
- ◆ *Do not allow engine oil to drip onto vehicle parts.*

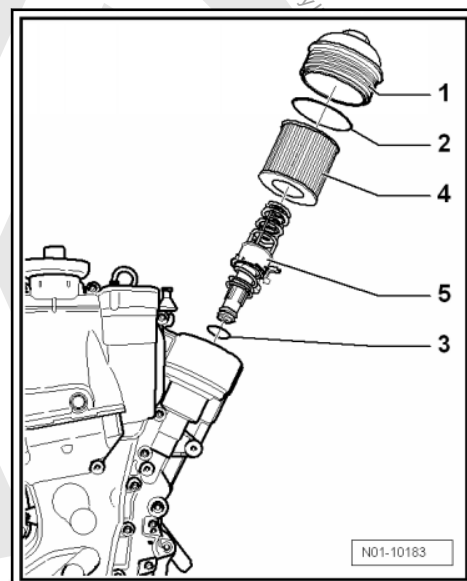
Removing

Remove the engine cover. Refer to [⇒ C4.33 over Top, Removing and Installing](#), page 170 .

- Remove the oil filter cover -arrow- using, for example, a 36 mm socket.



- Remove the oil filter cover -1-, the oil filter -4- and the valve -5-.



Installing

- Remove the O-ring -2- from the oil filter cover and the O-ring -3- from the valve.
- Replace the old oil filter with a new one -4-.



Note

Please follow all waste disposal regulations!

- Tighten oil filter cover -arrow- to 25 Nm.



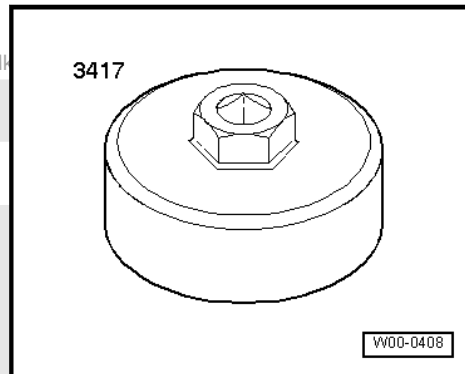


Install in reverse order of removal.

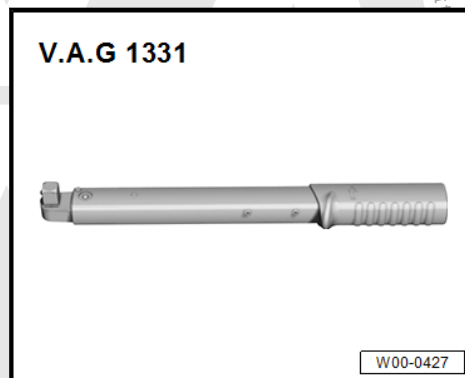
4.36.6 Oil Filter, Replacing, 1.4L TSI Engines (118 kW)

Special tools and workshop equipment required

◆ Wrench - Oil Filter -VAS 3417-



◆ Torque Wrench 1331 5-50Nm -V.A.G 1331-

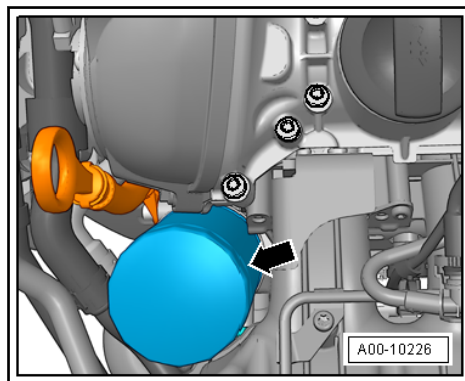


Removing



Note

- ◆ *Do not allow engine oil to drip onto vehicle parts.*
- ◆ *Cover the generator with a cleaning cloth before removing.*
- First loosen the oil filter -arrow- using a mounting strap or the Wrench - Oil Filter -3417-, before removing the oil filter completely.



- Wait a few minutes so that the engine oil can flow out of the filter and into the engine.



- Remove the oil filter.



Caution

Be careful not to let any oil drip onto the ribbed belt or generator.

Installing



Note

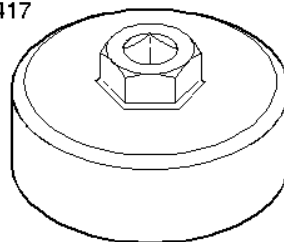
- ◆ *Follow the installation instructions on the oil filter.*
- ◆ *Please follow all waste disposal regulations!*
- Clean the oil filter sealing surface on the control housing.
- Lightly coat the oil filter seal with oil.
- Install the new oil filter -arrow- by hand.
- Then tighten to 20 Nm.

4.36.7 Oil Filter, Replacing, 1.4L TSI Hybrid Engine

Special tools and workshop equipment required

- ◆ Wrench Oil Filter -VAS 3417-

3417



W00-0408

- ◆ Torque Wrench 1331 5-50Nm -V.A.G 1331-

V.A.G 1331



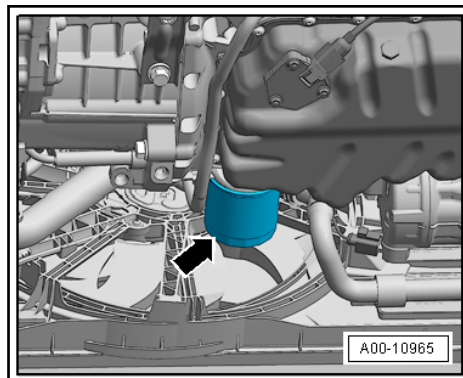
W00-0427

Removing

- Remove the “lower” engine compartment cover (noise insulation). Refer to ➤ [E4.34 Engine Compartment Cover \(Noise Insulation\), Removing and Installing](#), page 185.



- Loosen the oil filter -arrow- using the Hazet Tension Band -2171-1- and the Wrench - Oil Filter -3417- and then remove.



Installing



Note

- ♦ Follow the installation instructions on the oil filter.
- ♦ Please follow all waste disposal regulations!
- Clean the oil filter sealing surface on the engine.
- Coat the rubber seal of the oil filter with engine oil.
- Install the oil filter -arrow- and tighten hand-tight.
- Install the oil filter using the Wrench - Oil Filter -3417- and tighten to specification.
- Install the engine compartment cover (noise insulation) “bottom”. Refer to ➤ [E4.34 Engine Compartment Cover \(Noise Insulation\), Removing and Installing](#), page 185 .

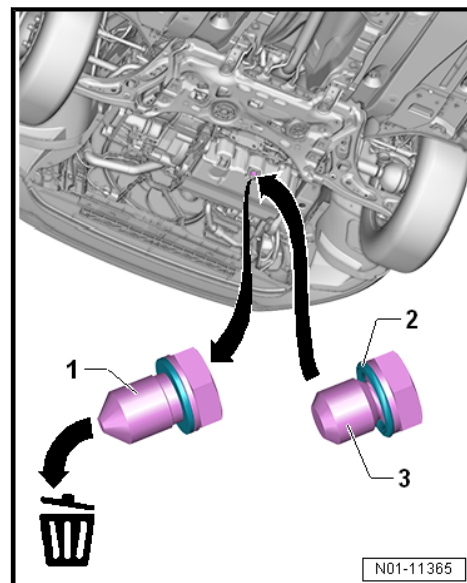
Tightening Specification	Nm
Oil filter	20

Engine Oil, Draining during First Oil Change. Refer to ➤ [page 198](#) .

Engine Oil, Draining after First Oil Change. Refer to ➤ [page 199](#) .

Engine Oil, Draining during First Oil Change

- Remove the oil drain plug with permanent seal -1- and dispose.
- Let the engine oil drain.



i Note

Please follow all waste disposal regulations!

- Install the new oil drain plug -3- with the new seal -2- hand-tight and then tighten to the specified tightening specification.

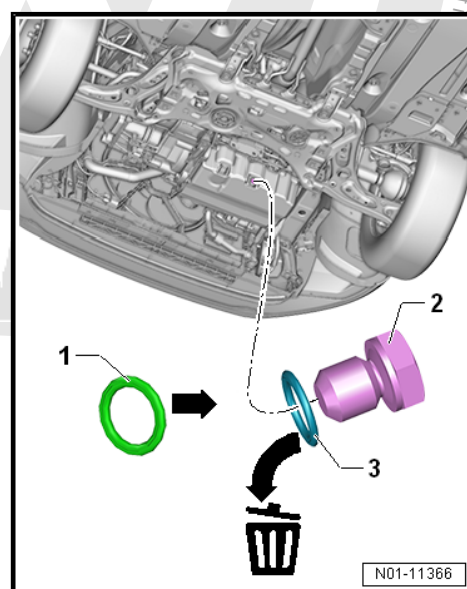
Engine Oil, Draining After First Oil Change

- Remove the oil drain plug -2- and dispose of the seal -3-.

i Note

The oil drain plug is used again after the first oil change.

- Let the engine oil drain.





Note

Please follow all waste disposal regulations!

- Install the oil drain plug -2- with the new seal -1- hand-tight and then tighten to the specified tightening specification.
- Install the engine compartment cover (noise insulation) “bottom”. Refer to ➤ [E4.34 Engine Compartment Cover \(Noise Insulation\), Removing and Installing](#), page 185 .

Tightening Specification	Nm
Oil drain plug	30

- Fill the engine oil. Correct oil specification. Refer to ➤ [T2.2 Tables for Market Designation A](#), page 20 .

Engine oil capacity:

- ◆ Refer to ➤ Rep. Gr. 17; Oil Pan/Oil Pump; Engine Oil.
- ◆ Maintenance Tables



WARNING

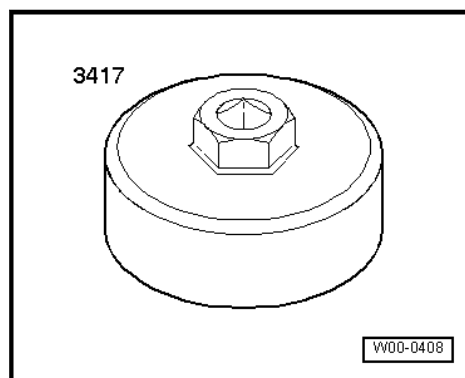


- ◆ *Do not exceed the tightening specifications.*
- ◆ *A too high of torque may lead to leaks near the oil drain plug or even damage.*

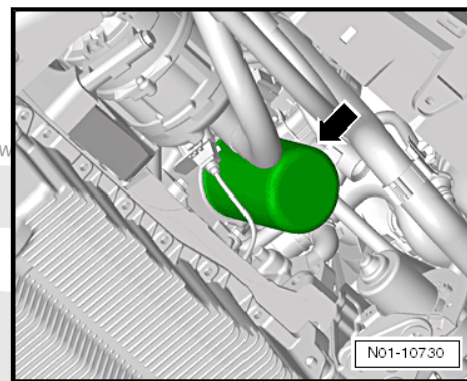
4.36.8 Oil Filter, Replacing, 1.6L and 2.0L SRE Engines

Special tools and workshop equipment required

- ◆ Wrench - Oil Filter -VAS 3417-



- Remove the lower engine compartment cover (noise insulation). Refer to ➤ [E4.34 Engine Compartment Cover \(Noise Insulation\), Removing and Installing](#), page 185 .
- Loosen oil filter -arrow- from below using tension strap or Wrench - Oil Filter -3417- as an aid.



Note

Please follow all waste disposal regulations!

- Clean the sealing surface on the engine oil cooler.
- Lightly coat the oil filter seal with oil.
- Tighten the filter by hand.
- Install the engine compartment cover (noise insulation) “bottom”. Refer to ➤ [E4.34 Engine Compartment Cover \(Noise Insulation\), Removing and Installing](#), page 185.

4.36.9 Oil Filter, Replacing, 1.6L FSI Engines

Special tools and workshop equipment required

- ◆ Torque Wrench 1331 5-50Nm -V.A.G 1331-

V.A.G 1331



W00-0427



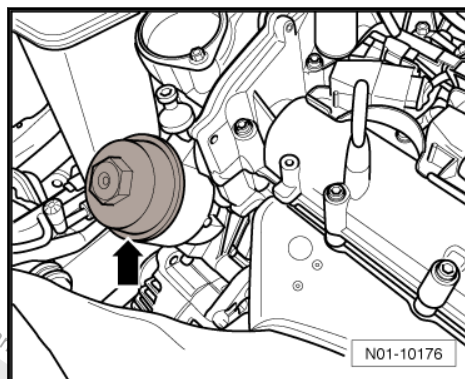
Note

- ◆ *Please follow all waste disposal regulations!*
- ◆ *Coat the new O-rings with oil before installing them.*
- ◆ *Be careful not to let oil drip onto other parts in the engine.*

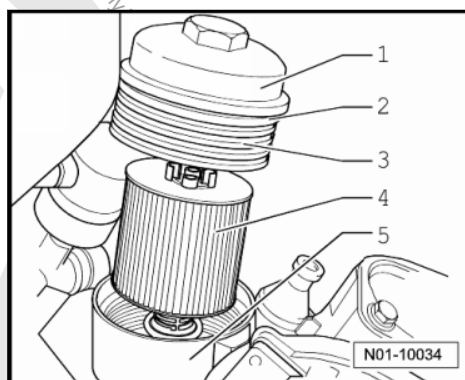
Removing

Remove the engine cover. Refer to ➤ [C4.33 over Top, Removing and Installing](#), page 170.

- Loosen the cap -arrow- at the hex fitting and remove it.

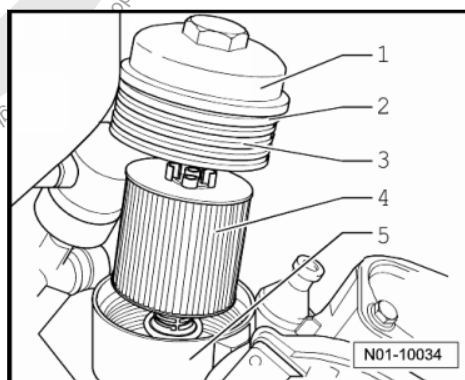


- Remove the oil filter -4- from the cap -1-.

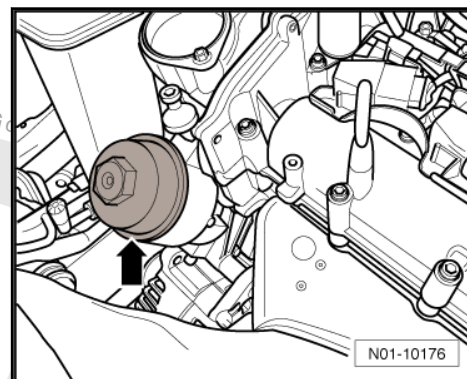


- Clean the sealing surfaces on the cap and on the oil filter housing.

Installing



- Insert the new filter -4- into the cap.
- Replace the seal -2-.
- Lightly coat the seal with oil.
- Clean the threads -3- and lightly coat with oil.
- Tighten the cap -arrow- to 25 Nm.

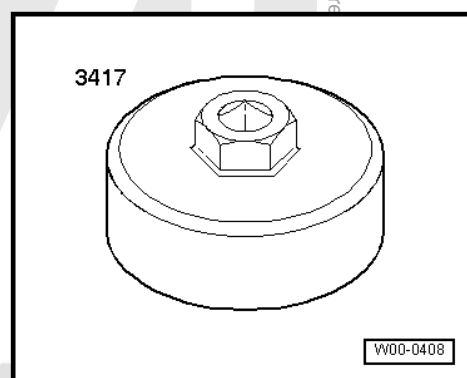


Install in reverse order of removal.

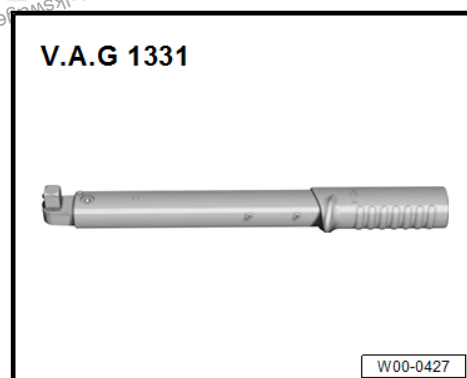
4.36.10 Oil Filter, Replacing, 2.0L TSI Engines

Special tools and workshop equipment required

- ◆ Wrench - Oil Filter - VAS 3417-



- ◆ Torque Wrench 1331 5-50Nm -V.A.G 1331-

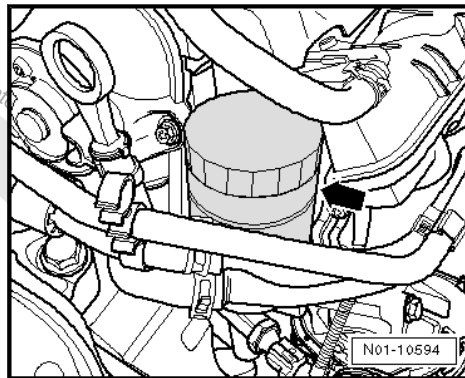


Removing



Note

- ◆ *Do not allow engine oil to drip onto vehicle parts.*
- ◆ *Cover the generator with a cleaning cloth before removing.*
- First loosen the oil filter -arrow- using a mounting strap or the Wrench - Oil Filter -3417-, before removing the oil filter completely.



- Wait a few minutes so that the engine oil can flow out of the filter and into the engine.
- Remove the oil filter.



Caution

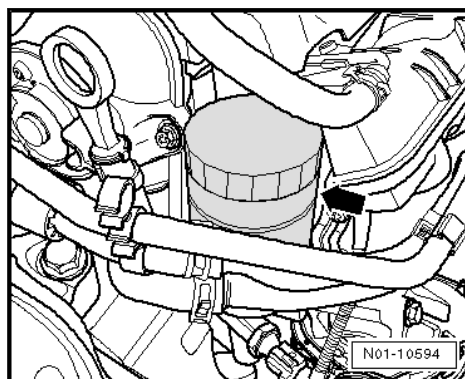
Be careful not to let any oil drip onto the ribbed belt or generator.

Installing



Note

- ◆ *Follow the installation instructions on the oil filter.*
- ◆ *Please follow all waste disposal regulations!*
- Clean the sealing surface of the oil filter on the sub-assembly bracket.
- Lightly coat the oil filter seal with oil.
- Install the new oil filter -arrow- by hand.



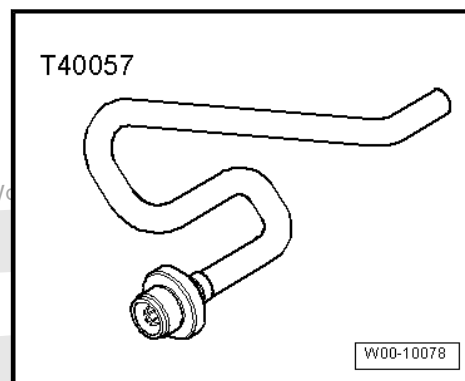
- Then tighten to 20 Nm.

4.36.11 Oil Filter, Replacing, 2.0L FSI and TFSI Engines, 2.5L SRE Gasoline Engines

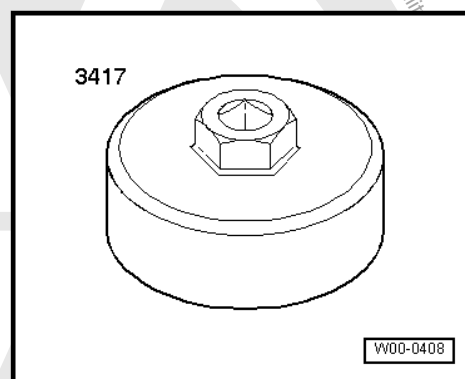
Special tools and workshop equipment required



- ◆ Oil Drain Adapter -T40057-



- ◆ Wrench - Oil Filter -VAS 3417-



- ◆ Torque Wrench, 6-50Nm -V.A.G 1331A-
- ◆ Needle Nose Pliers



Caution

- ◆ **Empty the oil filter housing before removing it.**

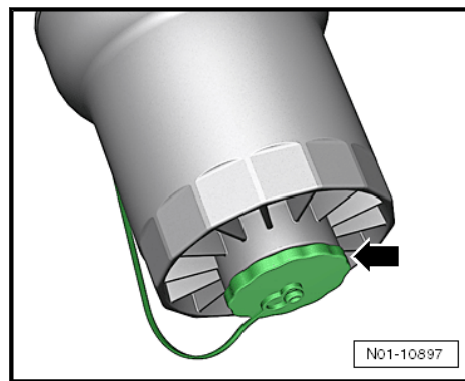
Draining the oil filter housing:

- Remove the “lower” engine compartment cover (noise insulation). Refer to ⇒ [E4.34 Engine Compartment Cover \(Noise Insulation\), Removing and Installing](#), page 185 .

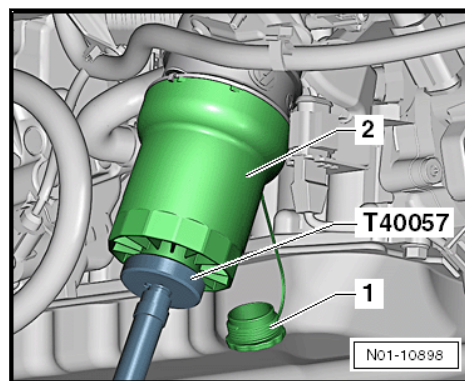


Note

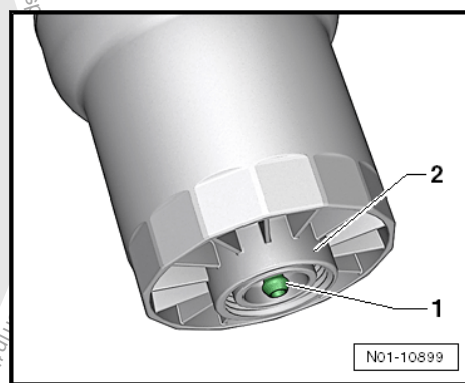
- ◆ *When screwing in the Oil Drain Adapter -T40057-, a valve is opened in the oil filter housing.*
- ◆ *If the Oil Drain Adapter -T40057- is removed again, the valve automatically closes again.*
- Remove the dust cap -arrow- from the oil filter housing.



- Install the Oil Drain Adapter -T40057- in the oil filter housing and hold the hose in a drip tray.

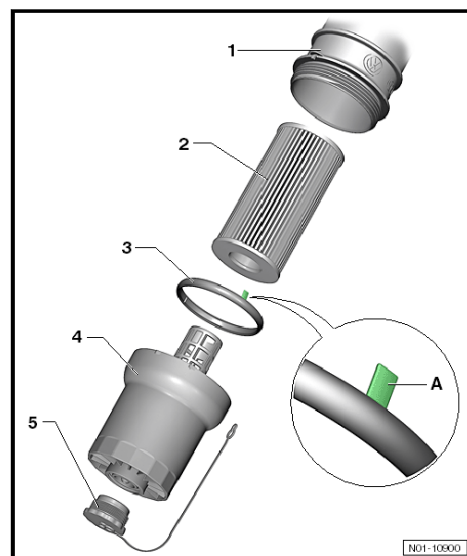


- Drain the engine oil.
 - Remove the Oil Drain Adapter -T40057- again.
- The drain valve -1- should seal flush with the bottom of the oil filter housing -2-.



Oil Filter Element, Removing

- Loosen the oil filter housing using the Wrench - Oil Filter -3417-.
- Then remove it by hand and remove it together with the oil filter element.
- Remove the oil filter element -2- from the center tube of the oil filter housing -4-.



Seal, Removing



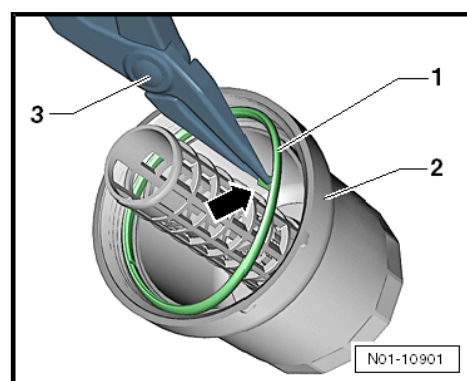
Caution

The seal on the oil filter housing -3- must be replaced each time the oil filter element -2- is replaced or every other time the oil filter housing is loosened.

The seal is equipped with a so-called "service flag"-A-.

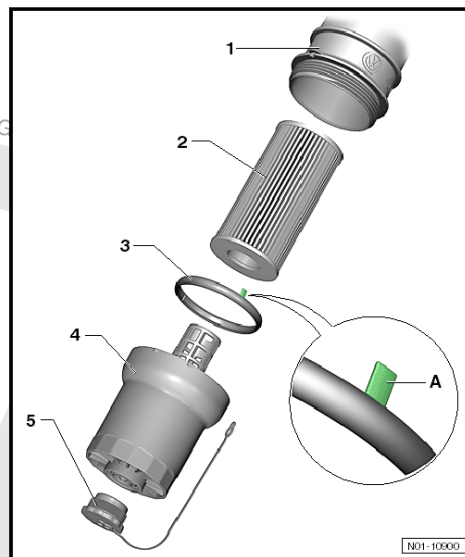
- ◆ *The seal can be gripped at the "service flag"-A- with a suitable tool and then removed from the seal groove.*

- Remove the seal -1- from the oil filter housing groove -2- by using the needle nose pliers -3- to pull the seal out at the "service flag"-arrow-

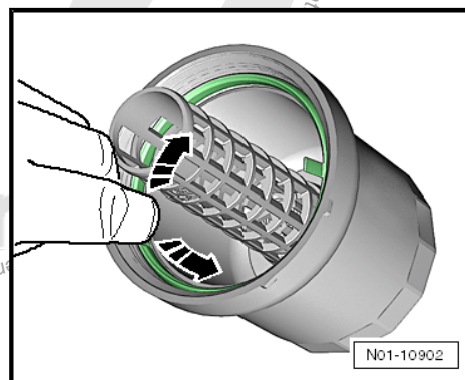


Seal, Installing

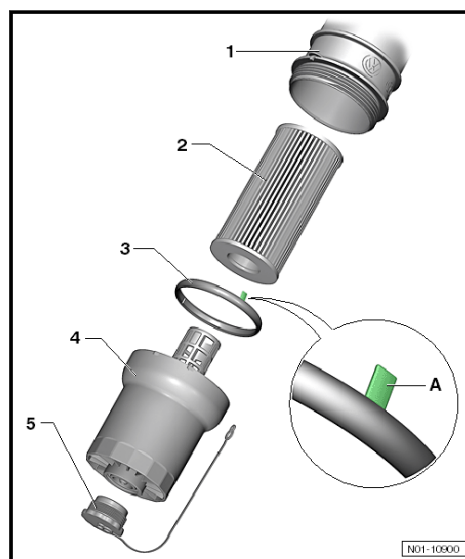
- Coat the seal -3- with oil.



- Install the seal into the groove in the oil filter housing making sure the service flag -A- is facing upward.
- Install the seal and then make sure it is even all the way around the groove.



Oil filter insert, installing

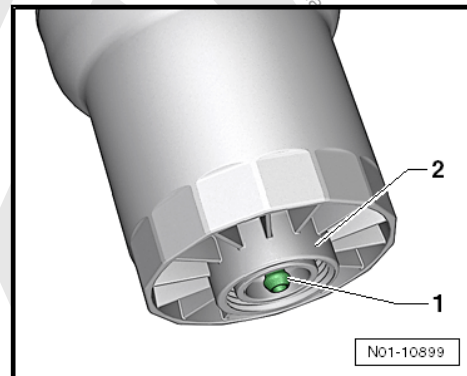


- Install the new oil filter element -2- all the way onto the center tube of the oil filter housing -4-.

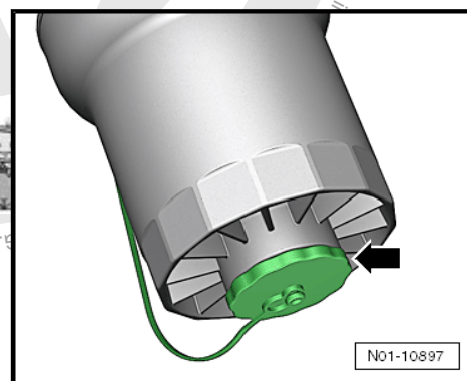


Oil Filter Housing, Installing

- Install oil filter housing -4- with new seal -3- and new oil filter element -2- by hand until almost at the oil filter bracket stop -1-.
- Tighten the oil filter housing -2- to 25 Nm.



- Install the dust cap -arrow- hand-tight in the oil filter housing.



- Install the engine compartment cover (noise insulation) “bottom”. Refer to ➔ [E4.34 Engine Compartment Cover \(Noise Insulation\), Removing and Installing](#), page 185.

4.36.12 Oil Filter, Replacing, PD Diesel Engines

Removing

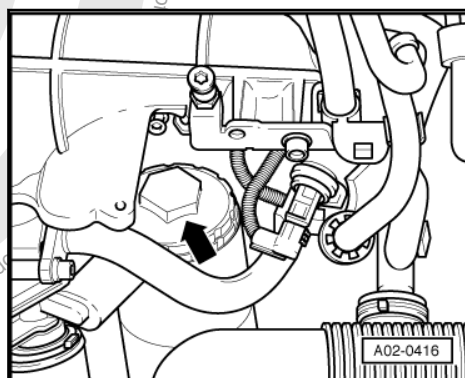
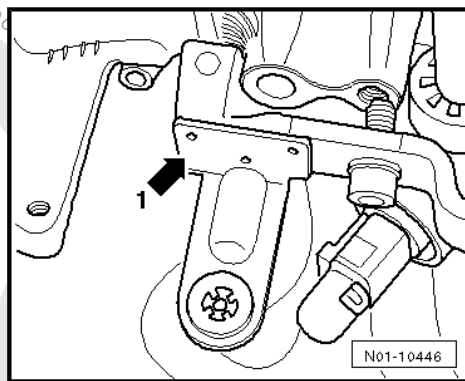


Note

- ◆ Please follow all waste disposal regulations!
- ◆ Coat the new O-rings with oil before installing them.
- Remove the bracket from the intake manifold -1- if equipped.
- If necessary, unclip the cable to get more space to remove the oil filter cap.



- Remove the cap -arrow-.

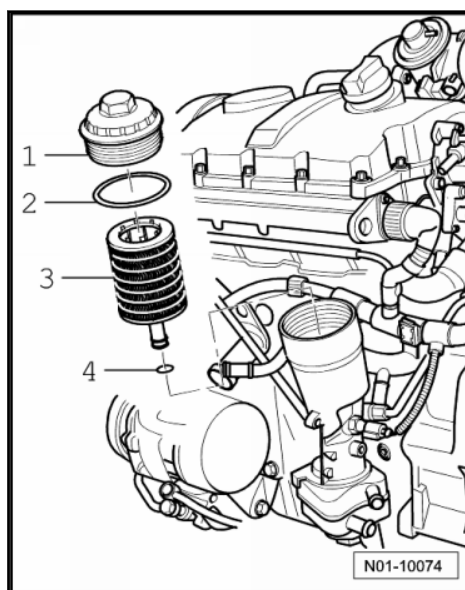


Note

Loosen the cap before draining / extracting, so that the engine oil can run out of the filter housing.

- Clean the sealing surfaces on the cap and on the oil filter housing.

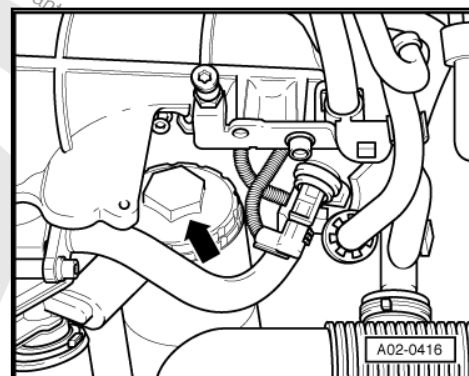
Installing



- Replace the filter element -3-.
- Replace the O-rings -2 and 4-.



- Install the cap -arrow- and tighten it to 25 Nm.



Install in reverse order of removal.

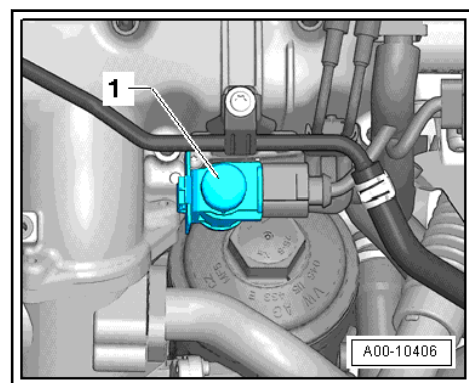
4.36.13 Oil Filter, Replacing TDI CR

Removing

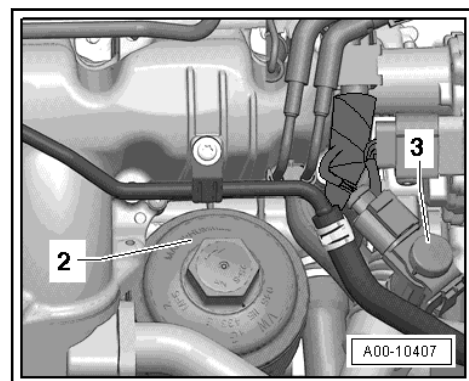


Note

- ◆ Please follow all waste disposal regulations!
- ◆ Coat the new O-rings with oil before installing them.
- Remove the magnet switch-over valve -1-.



- Loosen the cap -2- using a corresponding open end wrench or socket, for example.



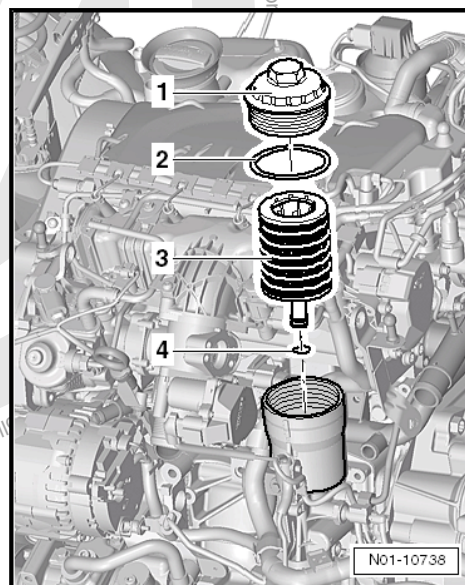


Note

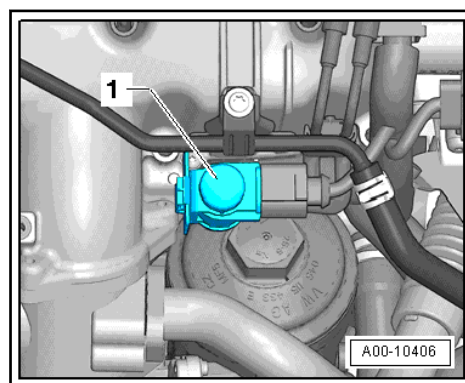
Loosen the cap before draining / extracting, so that the engine oil can run out of the filter housing.

- Clean the sealing surfaces on the cap and on the oil filter housing.

Installing



- Replace the filter element -3-.
- Replace the O-rings -2 and 4-.
- Install the cover and tighten to 25 Nm.



Install in reverse order of removal. Make sure the magnetic switching valve -1- audibly engages.

4.36.14 Oil Filter, Replacing, 1.8L (125 kW) and 2.0L (155 kW) TSI Engine

Special tools and workshop equipment required

- ◆ Socket 32 mm



- ◆ Torque Wrench 1331 5-50Nm -V.A.G 1331-

V.A.G 1331

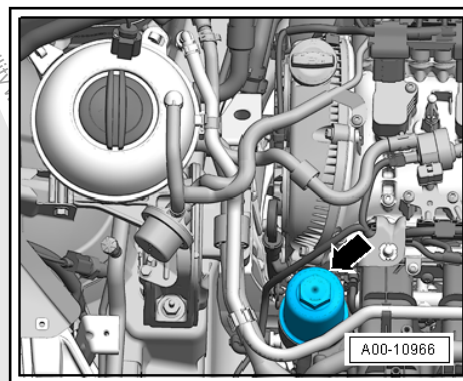


W00-0427

- ◆ Oil Absorbent Towel -VAS 6204/1-

Removing

- Remove the "upper" engine cover. Refer to ➔ [C4.33 over Top, Removing and Installing](#), page 170 .
- Loosen the oil filter housing -arrow- with Socket AF 32.



Wait a few minutes so that the engine oil can flow back into the oil filter housing.

- Remove the oil filter housing -arrow- completely.

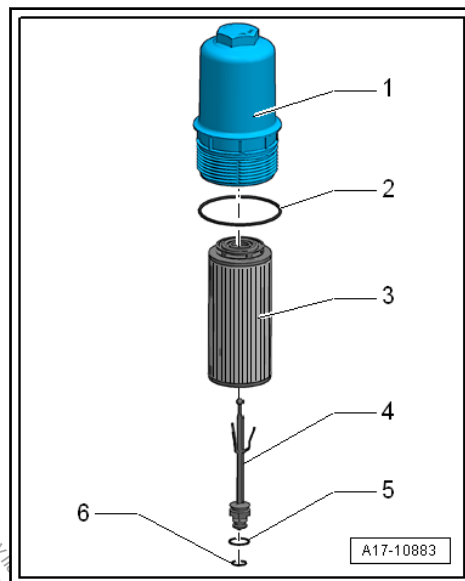


Note

Make sure that no engine oil drips onto the engine. If necessary, use an Oil Absorbent Towel -VAS 6204/1-.

Oil Filter, Changing

- Remove the oil filter -3-.
- Coat the O-ring -2- with engine oil and install it into the groove on the oil filter housing -1-.



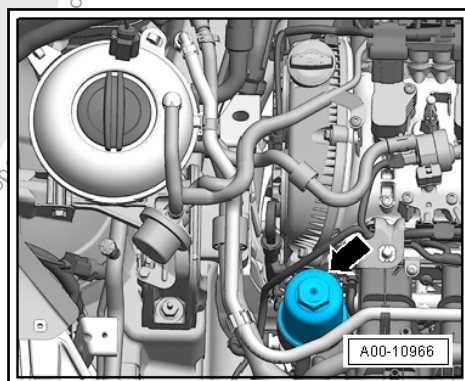
- Replace the oil filter -3-.



Note

Ignore items -4, 5 and 6-.

Install the oil filter housing -arrow- and tighten to the tightening specification using the 32 mm Socket.



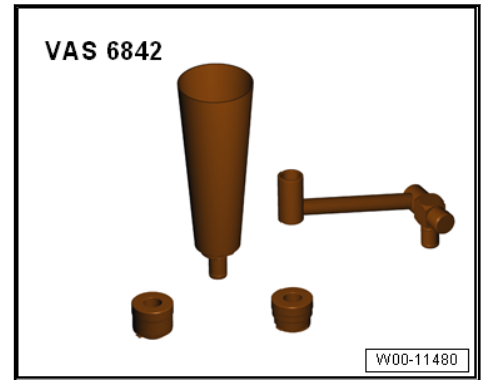
Tightening Specification	Nm
Oil filter housing	25

4.36.15 Engine Oil, Filling

Special tools and workshop equipment required



◆ Oil Funnel -VAS 6842A-



- If necessary, use the Oil Funnel -VAS 6842A- to fill the oil.

Engine Oil: Capacity and Specifications. Refer to ➤ [O4.37 il, Capacities and Specifications](#)", page 217 .

General Information



Note

Please follow all waste disposal regulations!

- After the oil is filled, wait at least three minutes and then check the oil level.
- Pull out the oil dipstick and wipe it with clean cloth. Insert the dipstick and push it all the way down.
- Pull out the dipstick again and read the oil level.

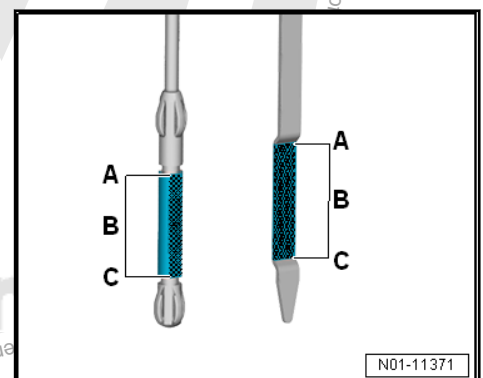
Only applies to engine codes: CNLA and CRJA



Note

- ◆ *The oil level must be at least in the upper third of the measuring field -B- during the pre-delivery inspection. So that the highest customer satisfaction can be reached.*
- ◆ *The amount of oil used during an engine oil change from the service table is determined by trial, and is sufficient for the engine operation in all operating conditions. For all services the oil level must be adjusted if necessary if the customer requests it. This makes an additional filling possible to the specified oil change amount to the maximum limit on the dipstick. Due to tolerances and also to oil temperature and flow back time, different fill capacities are possible.*

Markings on the oil dipstick:





A - Do not add oil.

B - The oil can be filled to the maximum limit -A-.

C - Add oil. The oil level must be at least in the upper half of the measuring range -B-.

- Drain or extract some of the oil if the oil level goes above the maximum limit -A- to prevent damage to the catalytic converter.
- If the oil level is under the minimum mark -C- fill the oil, minimum of 0.5 liters.

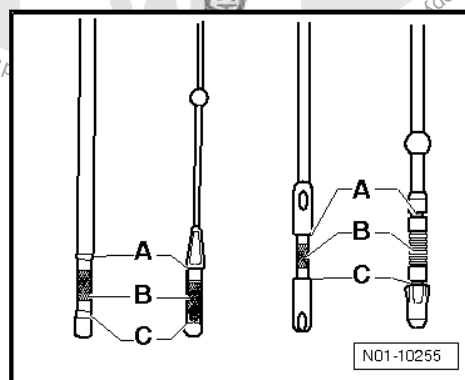
Applies to all other engine codes:



Note

- ◆ *The oil level must always be in the A range at the pre-delivery inspection. So that the highest customer satisfaction can be reached.*
- ◆ *The amount of oil used during an engine oil change from the service table is determined by trial, and is sufficient for the engine operation in all operating conditions. For all services the oil level must be adjusted if necessary if the customer requests it. This makes an additional filling possible to the specified oil change amount up to the maximum limit on the oil dipstick. Due to tolerances and also to oil temperature and flow back time, different fill capacities are possible.*

Markings on the oil dipstick:



A - Do not add oil.

B - Engine oil can be filled up to the -A- range.

C - Add oil. The oil level must be at least in the upper half of the measuring range -B-.

- Drain or extract some of the oil if the oil level goes above the -A- mark to prevent damage to the catalytic converter.
- If the oil level is under the -C- mark fill the oil, minimum of 0.5 liters. Oil specification



4.37 Engine Oil, Capacities and Specifications

⇒ [W4.37.1 agon", page 217](#)

⇒ [4.37.2 , page 218](#)

4.37.1 Golf Wagon

Gasoline Engines. Refer to ⇒ [page 217](#) .

Diesel Engines. Refer to ⇒ [page 217](#) .

Gasoline Engines

Gasoline Engines		Oil capacity with filter (l)	Volkswagen Engine Oil Standards	
Engine codes	Displacement/output		With flexible service	With fixed service
BSE	1.6L / 75 kW	4.5	504 00	502 00
BSF	1.6L / 75 kW	4.5	504 00	502 00
CAVD	1.4L / 118 kW	3.6	504 00	502 00
CAXA	1.4L / 90 kW	3.6	504 00	502 00
CBTA ¹⁾	2.5L / 125 kW	5.5	—	502 00
CBTA ²⁾	2.5L / 125 kW	6.0	—	502 00
CBUA ¹⁾	2.5L / 125 kW	5.5	—	502 00
CBUA ²⁾	2.5L / 125 kW	5.8	—	502 00
CBZA	1.2L / 63 kW	3.9	504 00	502 00
CBZB	1.2 / 77 kW	3.9	504 00	502 00
CCCA ¹⁾	2.5L / 125 kW	5.5	—	502 00
CCCA ²⁾	2.5L / 125 kW	6.0	—	502 00
CCSA	1.6L / 75 kW	4.5	—	502 00
CCZA	2.0 / 147 kW	4.7	504 00	502 00
CGGA	1.4L / 59 kW	3.2	504 00	502 00
CMXA	1.6L / 75 kW	4.5	504 00	502 00
CNWA	1.4L / 118 kW	3.6	504 00	502 00
CTHD	1.4L / 118 kW	3.6	504 00	502 00

¹⁾ applicable through MY 2010

²⁾ applicable from MY 2011

Diesel Engines

Diesel Engines		Oil capacity with filter (l)	Volkswagen Engine Oil Standards	
Engine codes	Displacement/output		With flexible service	With fixed service
BXE	1.9L / 77kW	3.8	507 00 / 506 01	505 01
CAYB	1.6L / 66 kW	4.3	507 00	507 00
CAYC	1.6 / 77 kW	4.3	507 00	507 00
CBDA	2.0L / 100 kW	4.3	507 00	507 00
CBDB	2.0 / 103 kW	4.3	507 00	507 00
CFHB	2.0L / 100 kW	4.3	507 00	507 00
CFHC	2.0 / 103 kW	4.3	507 00	507 00
CJAA	2.0 / 103 kW	4.3	507 00	507 00
CLCA	2.0L / 81 kW	4.3	507 00	505 01



4.37.2 Jetta

Gasoline Engines. Refer to ➤ [page 218](#) .

Diesel Engines. Refer to ➤ [page 219](#) .

Gasoline Engines

Gasoline Engines		Oil capacity with filter (l)	Volkswagen Engine Oil Standards	
Engine codes	Displacement/output		With flexible service	With fixed service
AXX	2.0 / 147 kW	4.6	504 00	502 00
BGP	2.5 / 110 kW	5.5	—	502 00
BGQ	2.5 / 110 kW	5.5	—	502 00
BLF	1.6L / 85 kW	3.5	504 00	502 00
BLR	2.0 / 110 kW	4.5	504 00	502 00
BLY	2.0 / 110 kW	4.5	504 00	502 00
BPY	2.0 / 147 kW	4.6	504 00	502 00
BSE	1.6L / 75 kW	4.5	504 00	502 00
BSF	1.6L / 75 kW	4.5	504 00	502 00
BTk	2.5 / 110 kW	5.5	—	502 00
CAVA	1.4L / 110 kW	3.6	504 00	502 00
CAVD	1.4L / 118 kW	3.6	504 00	502 00
CAXA	1.4L / 90 kW	3.6	504 00	502 00
CBFA	2.0 / 147 kW	4.7	504 00	502 00
CBPA	2.0L / 85 kW	3.6	—	502 00
CBTA ¹⁾	2.5L / 125 kW	5.5	—	502 00
CBTA ²⁾	2.5L / 125 kW	6.0	—	502 00
CBUA ¹⁾	2.5L / 125 kW	5.5	—	502 00
CBUA ²⁾	2.5L / 125 kW	6.0	—	502 00
CBZB	1.2 / 77 kW	3.9	504 00	502 00
CCCA ¹⁾	2.5L / 125 kW	5.5	—	502 00
CCCA ²⁾	2.5L / 125 kW	6.0	—	502 00
CCTA	2.0 / 147 kW	4.7	504 00	502 00
CCZA	2.0 / 147 kW	4.7	504 00	502 00
CFNA	1.6L / 77 kW	3.6	—	502 00
CKJA	2.0L / 85 kW	3.6	—	502 00
CLRA	1.6L / 77 kW	3.6	—	502 00
CMSB	1.4L / 90 kW	3.6	—	502 00
CNLA	1.4L / 110 kW	4	504 00	502 00
CPKA	1.8 / 125 kW	5.5	—	502 00
CPLA	2.0L / 155 kW	5.5	504 00	502 00
CPPA	2.0L / 155 kW	5.5	—	502 00
CPRA	1.8 / 125 kW	5.5	—	502 00
CRJA	1.4L / 110 kW	4	504 00	502 00
CTHA	1.4L / 110 kW	3.6	504 00	502 00
CTHD	1.4L / 118 kW	3.6	504 00	502 00

¹⁾ applicable through MY 2010



2) applicable from MY 2011

Diesel Engines

Diesel Engines		Oil capacity with filter (l)	Volkswagen Engine Oil Standards	
Engine codes	Displacement/output		With flexible service	With fixed service
BXE	1.9L / 77kW	3.8	507 00 / 506 01	505 01
AZV	2.0L / 100 kW	3.8	507 00	505 01
BKC	1.9L / 77 kW	3.8	507 00	505 01
BKD	2.0 / 103 kW	3.8	507 00	505 01
BLS	1.9L / 77 kW	4.3	507 00	—
BMM	2.0 / 103 kW	4.3	507 00	—
BRM	1.9L / 74 kW	4.3	507 00	505 01
CAYC	1.6 / 77 kW	4.3	507 00	507 00
CFFB	2.0 / 103 kW	4.3	507 00	507 00
CJAA	2.0 / 103 kW	4.3	507 00	507 00
CLCA	2.0L / 81 kW	4.3	507 00	505 01
CLCB	2.0L / 81 kW	4.3	507 00	505 01

4.38 Tire Mobility Kit, Checking



Note

- ◆ The break-down kit is located in the spare tire well.
- ◆ The tire mobility kit contains a tire inflation cylinder with tire sealant.
- ◆ The tire mobility kit is also call the "tire repair kit" of the "Tire Mobility System TMS".

Expiration Date, Checking



- Check the expiration date.

The expiration date is located on a sticker on the tire sealant container -arrow-.

- Enter the expiration date in the maintenance table.
- Replace the tire sealant once the expiration date is reached.
Tire sealant may not be older than 4 years.



Note

- ◆ *Replace the tire sealant if it was already used once.*
- ◆ *Please follow all waste disposal regulations!*



Note

- ◆ *Residual tire sealant or full bottles, which have expired, must be disposed of.*
- ◆ *Old tire sealant or residual sealant must not be mixed and disposed of with other fluids.*

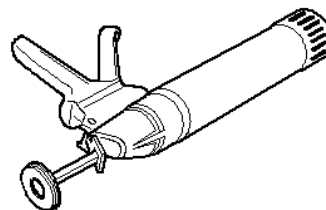
4.39 Panorama Sliding Sunroof: Checking Function, Clean And Lubricate Guide Rails With Special Lubricant, Clean Wind Deflector

Special tools and workshop equipment required

- ◆ Lint-free cloths
- ◆ Wet and Dry Vacuum Cleaner
- ◆ Grease -G 060 751 A2-
- ◆ Cartridge Gun -V.A.G 1628-

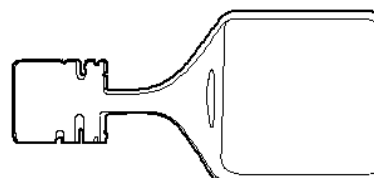
- ◆ Rail Cleaner -VAS 6621-

V.A.G 1628



W00-0536

VAS 6621



W00-10978



Note

- ◆ *PSR means panorama sliding sunroof.*
- ◆ *As a rule, regular maintenance is not required for the panorama sliding sunroof.*
- ◆ *If a cleaning and greasing is necessary due to noises occurring during the function test or there is bad contamination, clean and grease the areas according to the following description.*
- ◆ *The specified grease is the Grease -G 060 751 A2-. Do not use other grease.*



Caution

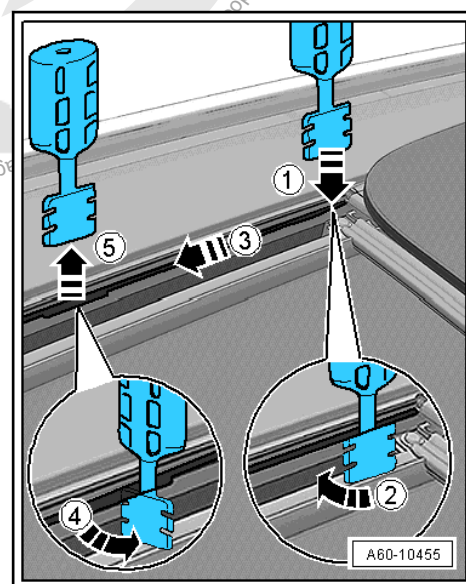
Hold a cloth under the respective places to protect the vehicle interior from debris.

Check the function if necessary clean the guide rails and coat with special grease.

- Check the PSR for damage.
- Check the PSR for function and noises.
- Open the sunroof shade completely.

Cleaning

- Only use the Rail Cleaner -VAS 6621- to clean and lubricate.
- Open the glass panel all the way.

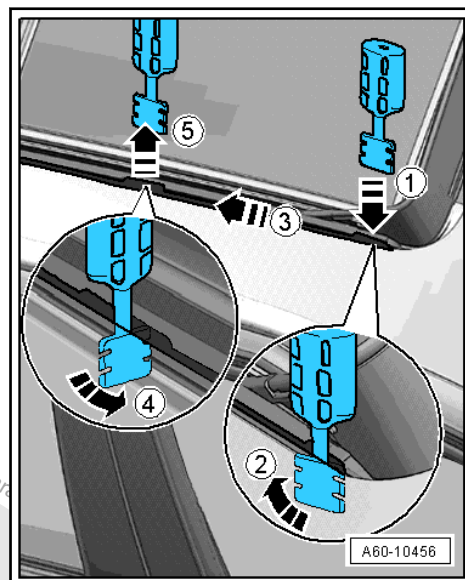


- Insert the Rail Cleaner -VAS 6621- in the rear area of the guide rail -1- and turn it 90° -2-.
- Move the Rail Cleaner -VAS 6621- into the center of the guide rail in the direction of the arrow -3-.
- Turn the Rail Cleaner -VAS 6621- 90° -4- and remove the tool -5-.
- Remove the collective grease and remaining dirt from the center of the guide rail with a lint-free cloth. (If necessary,



remove sand and fine pollen from the guide rails with a shop vacuum).

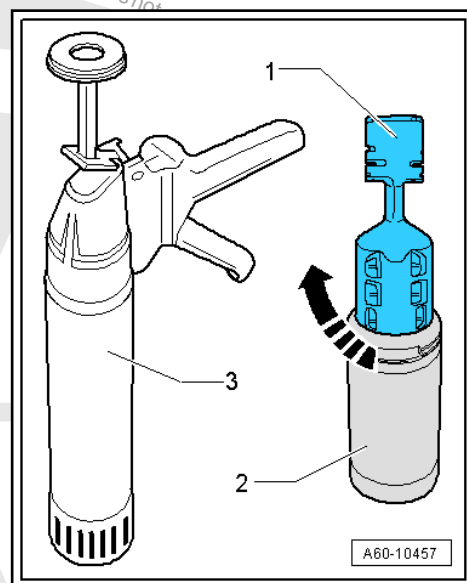
- Perform several times depending on the amount of debris in the opening.
- Insert the Rail Cleaner -VAS 6621- in the front area of the guide rail (near the wind deflector) -1- and turn it 90° -2-.



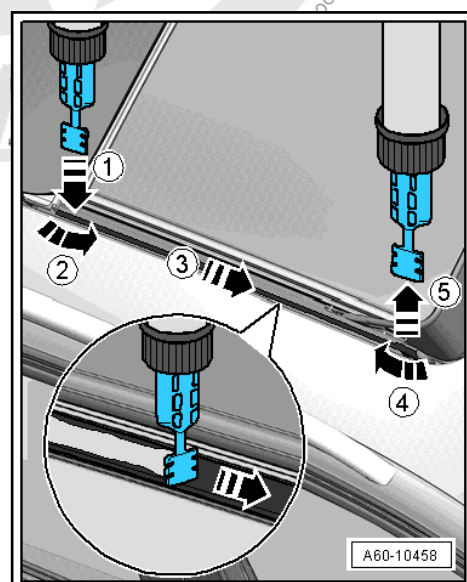
- Move the Rail Cleaner -VAS 6621- into the center of the guide rail in the direction of the arrow -3-.
- Turn the Rail Cleaner -VAS 6621- 90° -4- and remove the tool -5-.
- Remove the collective grease and remaining dirt from the center of the guide rail with a lint-free cloth. (If necessary, remove sand and fine pollen from the guide rails with a shop vacuum).
- Perform several times depending on the amount of debris in the opening.
- Repeat the process for the opening on the opposite side of the vehicle.

Lubricating

- Turn the Rail Cleaner -VAS 6621--1- on the thread of the Lubricant -G 060 751 A2- for the guide rails -2- in the -direction of the arrow- and insert it into the Cartridge Gun -V.A.G 1628--3-.



- Insert the Cartridge Gun with the Rail Cleaner -VAS 6621- at the rear end of the guide rail -1- and turn it 90° -2-.



- Apply the Lubricant -G 060 751 A2- for the guide rails to the front area in the direction of the arrow -3- while steadily operating the Cartridge Gun.
- Turn the Cartridge Gun with the Rail Cleaner -VAS 6621- 90° -4- and remove it -5-.
- Remove the excess lubricant from the guide rails with a lint-free cloth.
- Repeat the process for the opening on the opposite side of the vehicle.



Note

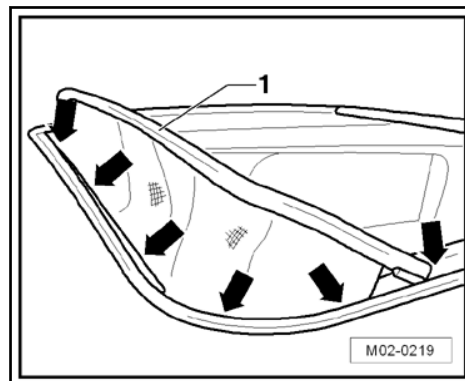
Make sure no other components are contaminated.



Caution

Correct any malfunctions (repair procedure).

Wind Deflector, Cleaning



- Check the wind deflector -1- for debris. Pay special attention to dirt build-up at the bottom of the wind deflector -arrows-.
- Remove any dirt deposits using, for example, the Wet and Dry Vacuum.
- To remove stuck insects and particles from the net and from the wind deflector frame, use a sponge and soapy water.

Soapy water mixture ratio: 3 drops of soap to every 1 liter of water



Caution

Do not use commercially available insect removers or other solvents as these products were not tested and approved.

- Then remove loosen insects and particles with a vacuum and a suitable vacuum tip.



Caution

- *The net on the wind deflector can be damaged if unsuitable nozzles are used!*



- Be careful that no dirt falls in the vehicle interior.

4.40 Road Test, Performing (Driving Behavior, Noises, A/C System, etc.)

The following checks depend on the vehicle equipment level and the available testing possibilities (city or rural).

During the road test, check the following:

- Engine: performance, stalling, idle, acceleration
- Clutch: starting behavior, pedal force, odor
- Shifting: ease of movement, gearshift lever position



- Automatic transmission: selector lever position, shift lock/ignition switch key lock, shift behavior, instrument cluster display
- Foot and parking brake: function, free play and effectiveness, pulling to one side, shuddering, squeaking
- ABS function: when braking with activated ABS, the brake pedal must pulse noticeably.
- Steering: function, steering play, steering wheel in the center position when driving straight ahead.
- Tilting sunroof: function
- Radio/radio/navigation system: functionality, reception, speed-compensated volume, objectionable noise
- Multifunction indicator: functions
- A/C system: function test. (At low temperatures, test the air conditioning function in the workshop)
- Vehicle: pulling to one side while driving straight ahead (level road)
- Imbalance: wheels, drive axles, driveshaft
- Wheel bearing: noises
- Engine: warm starting behavior

4.41 Wheel Bolts, Tightening to Specification

Wheel Bolt Covers, Removing and Installing

- ◆ Center Hubcap, Removing. Refer to [⇒ page 225](#) .
- ◆ Wheel Hubcap, Removing. Refer to [⇒ page 226](#) .
- ◆ Wheel Bolt Caps, Removing. Refer to [⇒ page 226](#) .
- ◆ Anti-Theft Wheel Bolts, Loosening and Tightening. Refer to [⇒ page 227](#) .
- ◆ Wheel Bolts, Tightening. Refer to [⇒ page 228](#) .
- ◆ Center Hubcap, Wheel Bolt Caps and Wheel Hubcap, Installing. Refer to [⇒ page 228](#) .

Center Hubcap, Removing



Caution

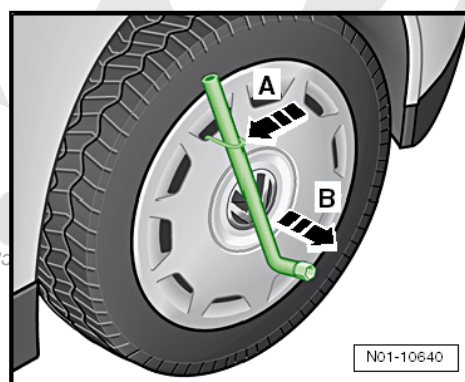
On vehicles with alloy wheels, do not pry out center hubcap with screwdriver. Rather, use special tool designed for this purpose (pulling hook in vehicle tool kit).

The pulling hook -1- for removing the caps is located in the vehicle tool kit.



- Insert the pulling hook into one of the center hubcap holes and pull in the -direction of the arrow-.

Wheel Hubcap, Removing



- If the vehicle has wheel hubcaps as shown, loosen the full wheel cover all around, for example, with the wire clip and wheel wrench from the vehicle tool kit -arrow A- and then remove it -arrow B-.

Wheel Bolt Caps, Removing



Caution

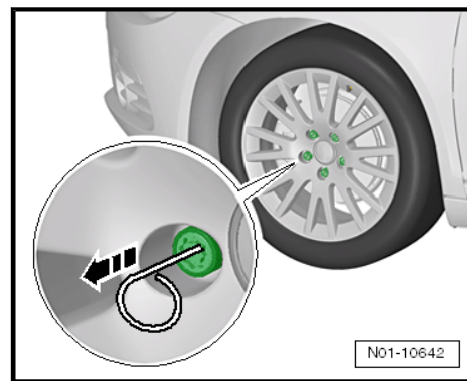
On vehicles with alloy wheels, do not pry out the wheel bolt caps with screwdriver. Rather, only use the special tool designed for this purpose (pulling hook in vehicle tool kit).



Note

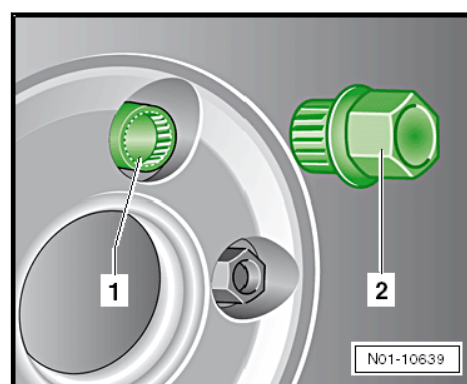
The wheel bolt caps must be removed before the wheel bolts can be loosened or tightened.

The pulling hook for removing the caps is located in the vehicle tool kit.



- Insert the wire through the opening in the cap.
- Remove the cap.

Anti-Theft Wheel Bolts, Loosening and Tightening

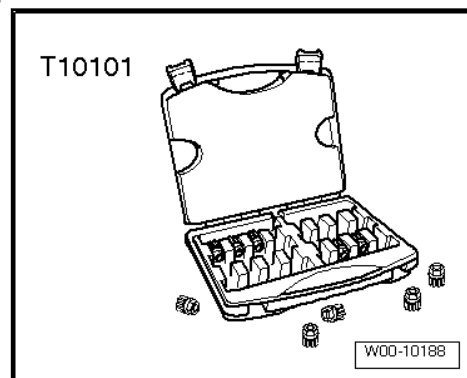


Note

- ◆ A special adapter is required to loosen/tighten anti-theft wheel bolts. It is included in the vehicle tool kit.
- ◆ Do not use an impact wrench to loosen the anti-theft wheel bolts (lockable wheel bolts).
- ◆ If the adapter to loosen/tighten the anti-theft wheel bolts is not present in the vehicle, use Master Wheel Bolt Key Set.

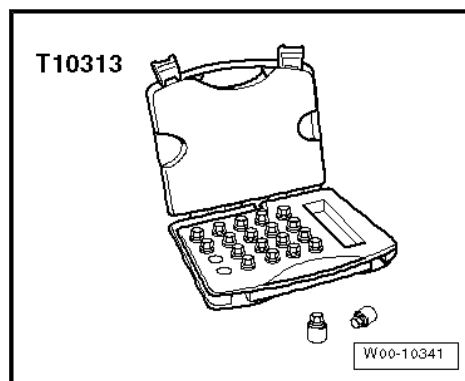
Special tools and workshop equipment required

- ◆ Wheel Lock Set -T10101-

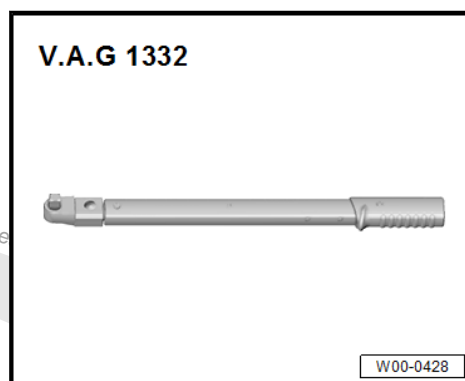




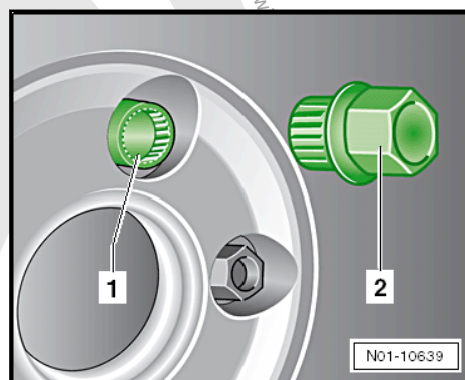
◆ Wheel Lock Set -T10313-



◆ Torque Wrench 1332 40-200Nm -V.A.G 1332-



- Slide the adapter -2- into the anti-theft wheel bolt -1-.



- Slide the wrench over the adapter -2-.

Wheel Bolts, Tightening

- Tighten the wheel bolts diagonally to the following tightening specification:
- ◆ 120 Nm



WARNING

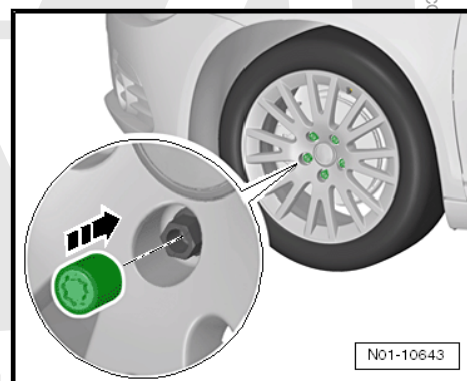
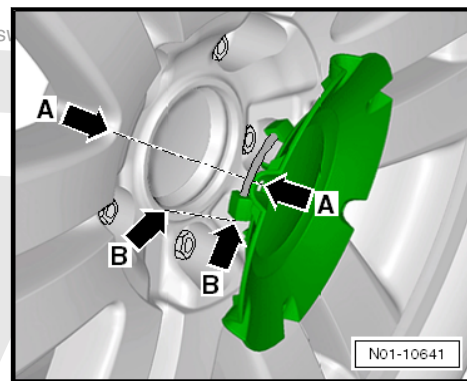
Never use an impact wrench to tighten a wheel bolt.

Center Hubcap, Wheel Bolt Caps and Wheel Hubcap, Installing

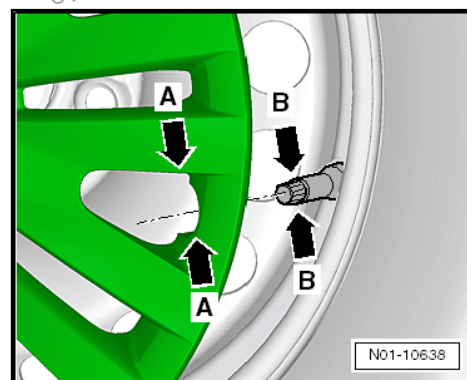
- Press the center hubcap on to the opening. Make sure -A and B- fit exactly onto the rim.



Install the caps on the wheel bolts.



Install the wheel hubcap evenly onto the steel rim. Make sure the valve -B- is seated inside the opening -A- in the cap.



Note

After the procedures have been completed, place the adapter and pulling hook back in the vehicle tool kit.

Tightening specification: 120 Nm

4.42 Radio Code, Checking with Vehicle Diagnostic Tester

Diagnostic tool access requirements


- The diagnostic tool is connected to the central database (Carport, Fazit) via the Central Partner Network (CPN).
- The existing access authorization for the "GeKo" system user. (security and component protection)



Note

- ◆ *The radio codes can be requested in the central database and shown on the vehicle diagnostic tester display.*
- ◆ *To activate the radio, the codes must be entered via the radio keys, as before. Refer to ➤ [N4.43 avigation System, Entering Anti-Theft Coding PIN and Saving Local Radio Stations to Station Buttons](#), page 230.*

Procedure

- Connect the Vehicle Diagnostic Tester. Refer to ➤ [D3.5 iag-nostic Tester, Connecting](#), page 57.
- Switch the ignition on.
- Touch the “GUIDED FUNCTIONS” button/field on the screen.
- Press the  button to confirm.
- Select the following one after the other:
 - ◆ Brand
 - ◆ Type
 - ◆ Model year
 - ◆ Engine codes
- Confirm the VIN.
- Select the following one after the other:
 - ◆ “Radio system”.
 - ◆ “Request radio code”.
- Perform code request according to instructions from “GUIDED FUNCTIONS”.
- End the code request as follows:
 - Press the “GO TO” button -arrow-.
 - Press the “end” button on the display.
 - Push the “end” button in the “end” menu.
- Turn off the ignition and disconnect the diagnostic connector.

4.43 Radio/Radio Navigation System, Entering Anti-Theft Coding PIN and Saving Local Radio Stations to Station Buttons

➤ [R4.43.1 Radio and Navigation Systems](#), page 230

➤ [N4.43.2 avigation System and Radio, TravelPilot DX-R4 / RN S4](#), page 233

4.43.1 Volkswagen Radio and Navigation Systems

The anti-theft coding electronically prohibits unauthorized individuals from starting the unit again after it has been removed. This anti-theft code is also called the radio code or security code. Security code means that every unit with anti-theft coding has been programmed with its own code. This security code is not active from the factory. If a device card is present, the security code is on it. If the device card is not present, the



security code can be requested from the central database using the Vehicle Diagnostic Tester. Refer to ➤ [C4.42 ode, Checking with Vehicle Diagnostic Tester](#), page 229.



Note

If an incorrect code is entered while canceling the electronic lock, the entire process can be repeated just one time more. If an incorrect code is entered once again, the unit will lock up for about one hour. This means that it will not work. After an hour, during which the unit must remain switched on, the display will go out. The electronic lock can be canceled as previously described. The cycle: 2 attempts, an hour locked, begins again.

Procedure

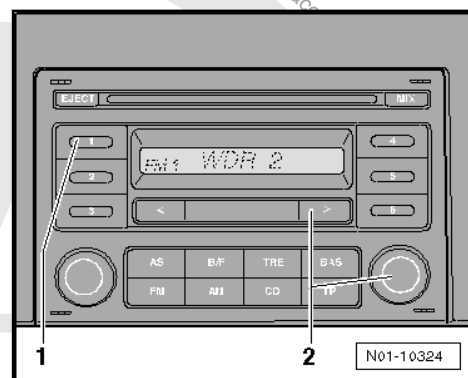
Vehicle Electrical System → Communication. Refer to ➤ Rep. Gr. 91 ➤, for example, "RCD 500" Sound System → Electronic Anti-Theft → Electronic Anti-Theft, Deactivating.

For technical reasons it is possible the links do not go to the correct chapter. If that is the case, please look up the procedure manually in the corresponding infomedia.

On the "Radio system RCD 200" activate the code as follows:

- Turn on the radio.

"SAFE" appears in the display and after 3 seconds "1000".



- Using the radio station button 1 enter the first digit of the four digit code. Using the radio station button 2 the second digit etc.
- Confirm the code by holding both buttons -2- pressed for two seconds.

The radio is ready to be used.

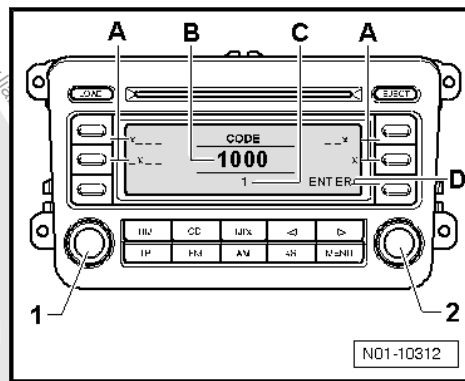


Note

- ◆ *If the radio is removed or the vehicle battery disconnected the anti-theft code must no longer be entered manually. The code number is saved after entering in the vehicle the first time.*
- ◆ *If the radio is installed in another vehicle, the code number must be manually entered again.*

For the "Radio system RCD 300" and "Radio system RCD 500" activate the code as follows:

- Turn on the radio/navigation system by pressing button -1-.



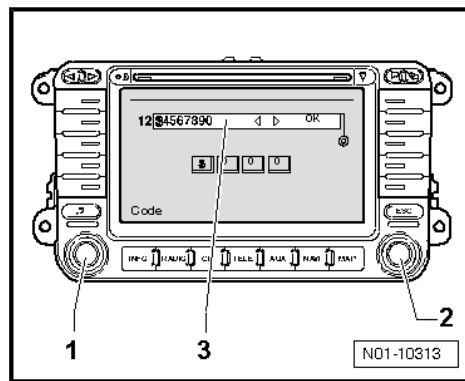
- “SAFE” appears in the digital display.
- After three seconds “1000” appears on the display.
- Using the multifunction buttons -A- enter the code number on the radio code.

In the display near the four multifunction buttons the position of the code number to be set is displayed with an -X-.

- Push the respective multifunction button until the correct digit is displayed in the center of the display -B-.
- If the input was ended correctly, press the multifunction button -D- near the word “ENTER”.

The radio is ready to be used and gain and switches to the last operating condition.

On the "radio/navigation system MFD 2" activate the code as follows:



- Turn on the radio/navigation system by pressing button -1-.

The security code can be found on the device card.

- Enter the numeric code, by turning the rotary/push knob -2-. Mark the digits in the digit list -3- one after the other and confirm after entering each digit by quickly pressing the knob.
- Confirm the numeric code, by turning the rotary/push knob -2-. Mark the “OK” in the digit list -3- and confirm by quickly pressing the knob.

If the security code was entered in the radio properly, after a short “Learning phase” the current frequency will be displayed.

The LED at upper right of radio-navigation system must blink when ignition key is removed.

If the LED flashes, the radio/navigation system is ready for operation and the anti-theft coding is active.



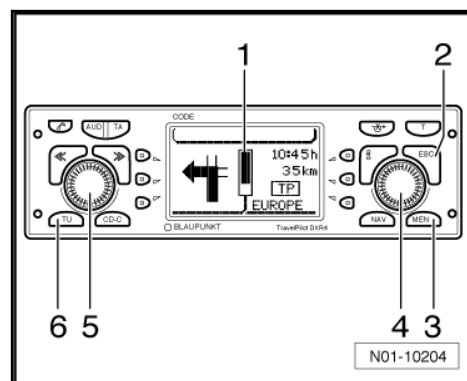
4.43.2 Blaupunkt Navigation System and Radio, "TravelPilot DX-R4 / RN S4"

The radios / navigation systems are delivered with a code. Anti-theft code means that every device with anti-theft coding is programmed with a unique code. This code must be activated after the installation.

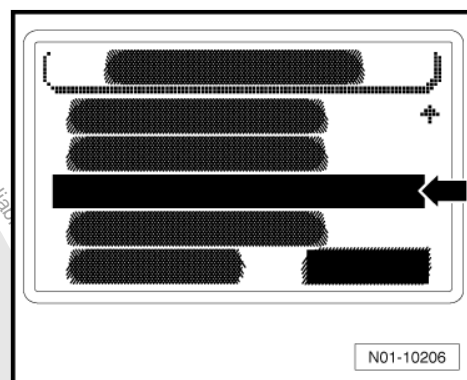
For devices from Blaupunkt "TravelPilot DX-R4 / RN S4" activate the code as follows:

The security coding of the ready-to-use unit is only activated by entering the fixed code. Activate the code as follows:

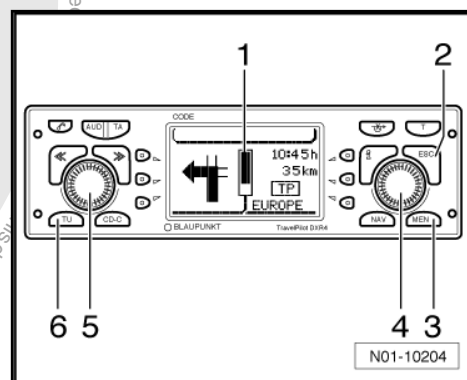
- Turn on the radio/navigation system by pressing button -5-.



- The coding is activated as follows in the setup menu "SECURITY" -arrow-:



It is located in a "main menu" or "functions menu".



- Push the **MEN** button -3- "TWICE".

The device changes to the setup menu.



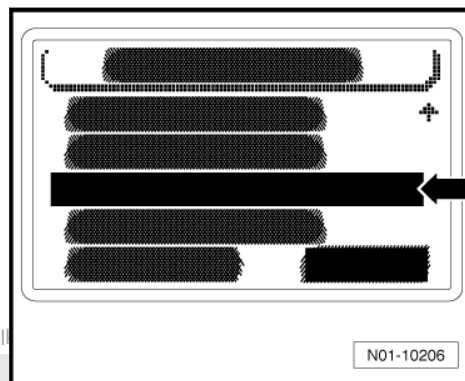
If the “adjustment menu” an audio source of the “navigation menu” is active:

- Push the **MEN** button -3- “ONCE”.

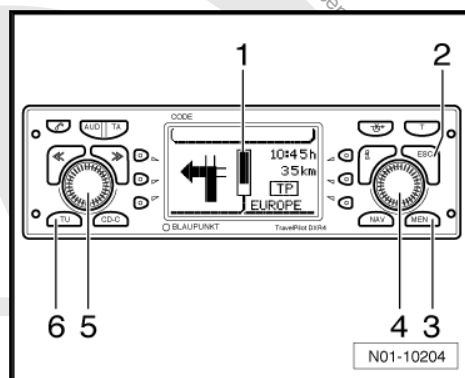
The device changes to the setup menu.

To perform the settings and to start the menu items.

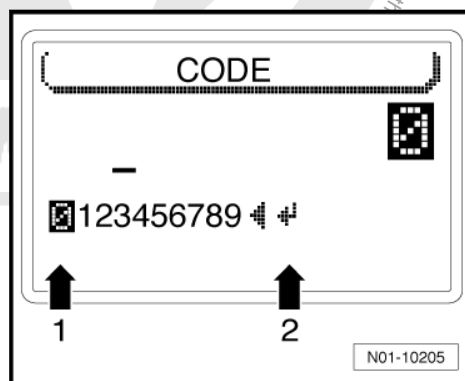
- Move the selection bar with the rotary/push knob -4-.
- Select the “SECURITY” menu item -arrow-.



- In the “SECURITY” setup menu mark the menu item “CODE” and press the rotary/push knob -4-.



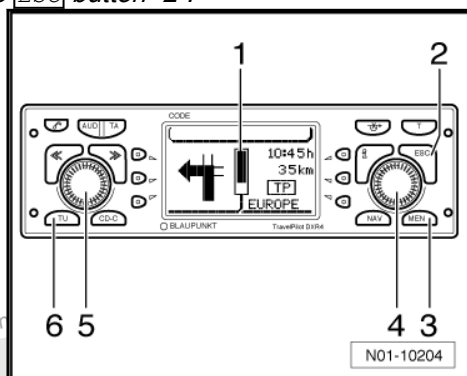
- Enter the number code by turning the right rotary/push knob to the digit list in the display -arrow 1- and mark the digits one after the other. After the input of each number quickly press the right rotary/push knob to confirm.



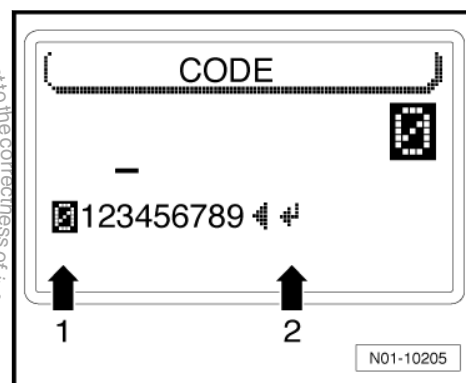


Note

If an incorrect number is entered accidentally, mark the "back symbol" ← and press the **ESC** button -2-.



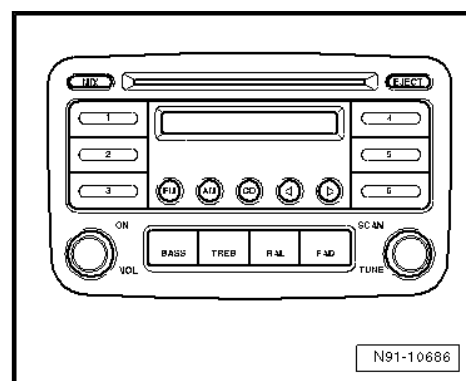
- Perform the following procedure:
- Enter the complete code.
- Confirm the code by marking the "return symbol" -2- with the rotary/push knob and then press the rotary/push knob.



If the security code was entered in the radio properly, after a short "Learning phase" the current condition will be displayed behind the "CODE".

- ◆ The basic setting is "OFF", this means the code is not activated.
- ◆ The basic setting is "ON", this means the code is activated.

On "Sound System" radio system for USA and Canada vehicles, activate fixed code as follows:



- Turn on the radio.

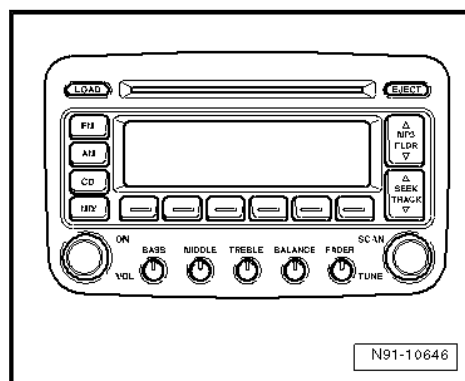


The unit automatically displays "SAFE" and then "1000". It is not necessary to press any buttons.

- Using the station preset buttons 1 through 4, enter the code number found on the radio card sticker. Button 1 adjusts the number in the first position, button 2 the second, etc.
- Press the "arrow" button, that is located over the "FAD" button. Hold the button pressed, until the anti-theft code is active. This is indicated by a short signal tone.

If the code number has been entered correctly in the radio, a radio frequency appears in the display.

For the "Premium Sound System" radio system in the USA and Canada, activate the code as follows:



- Turn on the radio.

The unit automatically displays "SAFE" and then "1000". It is not necessary to press any buttons.

- Using the station preset buttons 1 through 4, enter the code number found on the radio card sticker. Button 1 adjusts the number in the first position, button 2 the second, etc.
- Press the radio station button that is located under the "OK" display in the display (normally it is the last radio station button). Hold the button pressed, until the anti-theft code is active. This is indicated by a short signal tone.

If the code number has been entered correctly in the radio, a radio frequency appears in the display.

4.44 Tire Pressure Monitoring System, Performing Basic Setting

⇒ [P4.44.1 ressure Monitoring System \(TPMS\) for North America", page 239](#)

Applies only to tire pressure monitoring system display with PR number 7K6

Tire pressure monitoring system (TPMS) for North America.

Refer to ⇒ [P4.44.1 ressure Monitoring System \(TPMS\) for North America", page 239](#) .



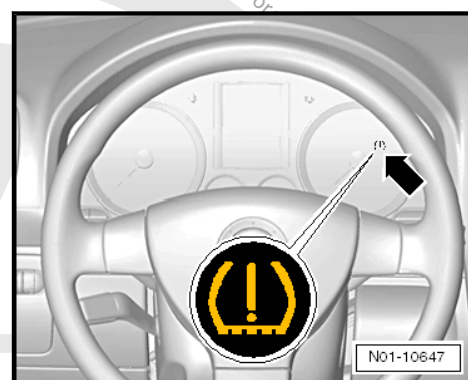
Note

- ◆ *Perform the basic setting on the Tire Pressure Monitoring System only "after" the tire pressures have been adjusted to the correct values.*
- ◆ *If no pressure loss and no tire damage is detected after a tire pressure warning, the erroneous warning can be eliminated by a basic setting.*

The Tire Pressure Monitoring System compares the speed and the tire tread circumference on each wheel using the ABS speed sensors. The tire pressure monitoring system shows when there is a difference in the tire tread circumference on a wheel. The tire tread circumference changes when:

- ◆ The tire pressure is too low.
- ◆ Tires have structural damage.
- ◆ Vehicle is loaded on one side.
- ◆ Wheels of one axle are loaded higher, for example, when towing trailer or driving uphill and downhill.
- ◆ Snow chains are installed.
- ◆ Spare wheel is installed.
- ◆ One wheel per axle was replaced.

The yellow Tire Pressure Monitoring Display Indicator Lamp is inside the instrument cluster -arrow-.



- ◆ "BLINKING LIGHT" means that no "INITIAL BASIC SETTING" was performed yet.
- ◆ "STEADY LIGHT" with a warning tone means "WARNING", a loss of pressure was detected; check tire pressures and perform a system basic setting.

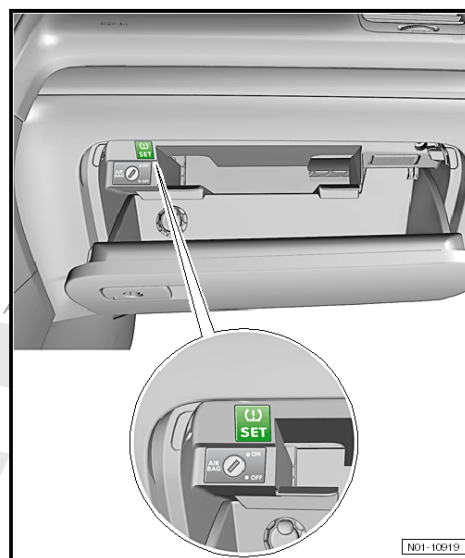
Perform the "INITIAL" basic setting:

- Switch the ignition on.
- Press the **ESP** and **SET** buttons in the center console together at the same time and hold for longer than 2 seconds.





The **SET** button is either in the center console or inside the glove compartment.



If the ESP is not present, push the **ASR** button.

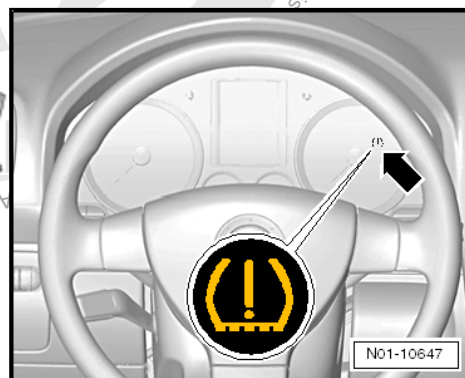
The start of the basic setting is confirmed by a warning tone.

On next new ignition start, warning does not appear.

Basic Setting, Performing

- Switch the ignition on.
- Press the **SET** button (either in the center console or inside the glove compartment) and hold for longer than 2 seconds.

The tire pressure monitoring system display indicator lamp in the instrument cluster -arrow- stays on as long as the button is pressed.



The start of the basic setting is confirmed by a warning tone.

On next new ignition start, warning does not appear.

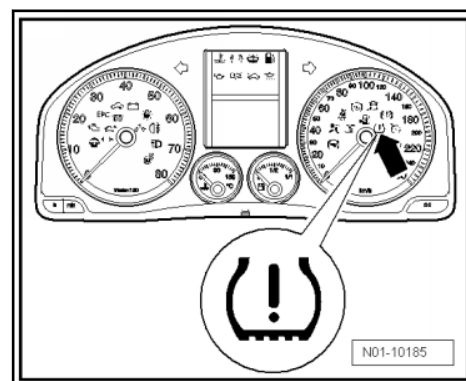
4.44.1 Tire Pressure Monitoring System (TPMS) for North America



Note

- ◆ *Perform the basic setting on the tire pressure monitoring system only after the tire pressure values have been adjusted to the correct values.*
- ◆ *If no pressure loss and no tire damage is detected after a tire pressure warning, the erroneous warning can be eliminated by a basic setting.*

The yellow Tire Pressure Monitoring Display Indicator Lamp -K220- is located in the instrument cluster -arrow-.



After changing the tire pressures or changing one or more tire pressure the following adaptation must be performed.

- Connect the Vehicle Diagnostic Tester. Refer to [⇒ D3.5 iag-nostic Tester Connecting](#), page 57.
- Switch the ignition on.
- Touch the **Guided Fault Finding** button/field on the screen.
- Select the vehicle data.

All control modules present will be checked.

- Follow the instructions in the Vehicle Diagnostic Tester in the "Guided Fault Finding".

4.45 Tire Pressure Monitoring Sensor, Replacing

The tire pressure monitoring sensor must only be reset on the "tire pressure monitoring system" with the PR number 7K3. The parallel supplied system "tire pressure monitoring system" with the PR number 7K6 does not have a tire pressure monitoring sensor. The tire pressure monitoring system compares the speed and the tire tread circumference on each wheel using the ABS speed sensors.

Also refer to the Self-Study Program. Refer to ⇒ Self Study Program No. 347; .





Note

- ◆ *The tire pressure monitoring sensor is located on the inside of the disc wheel or the rim.*
- ◆ *To remove and install the tire pressure monitoring sensor the tires must be removed.*
- For the procedure refer to the repair manual »Suspension, Wheels, Steering«⇒ Suspension, Wheels, Steering; Rep. Gr. 44; Tire Pressure Sensors, Removing and Installing»Tire Pressure Sensors, Removing and Installing«.

4.46 Windshield Wiper and Washer System and Headlamp Washer System, Checking Function

⇒ [W4.46.1 asher Fluid, Checking Freeze Protection and Filling”, page 240](#)

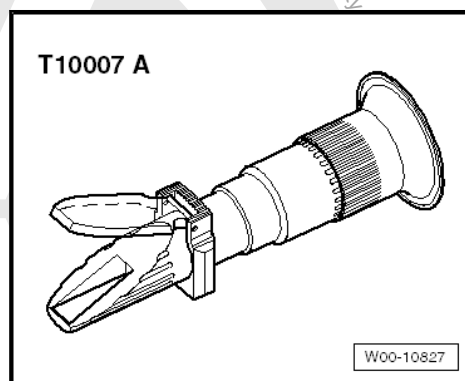
⇒ [W4.46.2 ipper/Washer System, Checking and Adjusting Spray Nozzles”, page 241](#)

⇒ [W4.46.3 asher System, Checking Washer Nozzle Adjustment”, page 243](#)

4.46.1 Windshield Washer Fluid, Checking Freeze Protection and Filling

Special tools and workshop equipment required

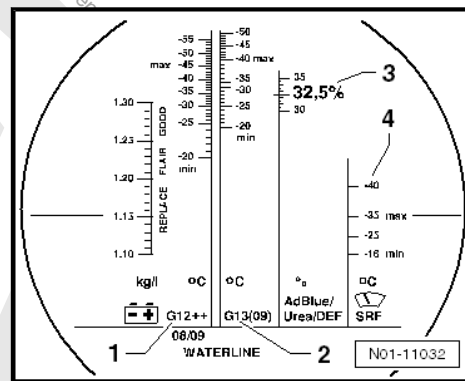
- ◆ Refractometer -T10007A-



Read the cut-off line to obtain an accurate value for the following tests. Place a drop of water on the glass using a pipette to improve the readability of the cut-off line. The cut-off line can be clearly recognized on the “WATERLINE”.

- Check the concentration of the anti-freeze additive using the Analog Refractometer -T10007B-.

The scale -4- of the refractometer relates to the Windshield Washer Fluid Concentrate -G 052 164-.



Mixture Ratio:

Freeze protection to	Windshield washer fluid concentrate G 052 164	Water
-17/-18 °C (-1.4/-0.4 °F)	One part	Three part
-22/-23 °C (-7.6/-9.4 °F)	One part	Two part
-37/-38 °C (-34.6/-36.4 °F)	One part	One part

Filling with Fluid:

The windshield washer system fluid reservoir must be filled.

Use only Windshield Washer Fluid Concentrate -G 052 164- from now on when filling the windshield wiper/washer system.



Note

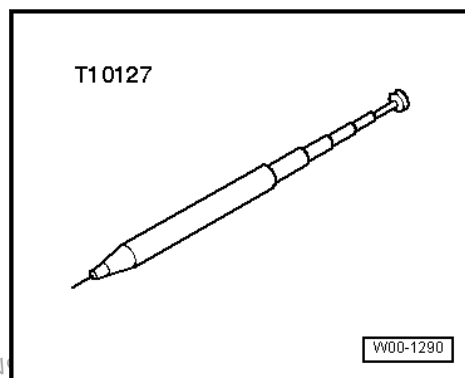
- ◆ The Windshield Washer Fluid Concentrate -G 052 164- protects the spray jets, fluid reservoir and hoses from freezing.
- ◆ All vehicles with spray nozzles must be filled with Windshield Washer Fluid Concentrate -G 052 164- as this fluid has a low viscosity at negative temperatures. The complicated spray jet system could otherwise become blocked due to crystallized washer fluid that can affect the fan pattern of the spray. Windshield Washer Fluid Concentrate -G 052 164- assures that the spray nozzles remain functional even at low temperatures.
- ◆ Also fill Windshield Washer Fluid Concentrate -G 052 164- in the warmer periods of the year. The powerful cleanser removes wax and oil deposits from the window.
- ◆ Freeze protection (anti-freeze) must be guaranteed to approximately -25 °C (-13 °F) (approximately -35 °C (-31 °F) in countries with an arctic climate) in the washer system.

4.46.2 Windshield Wiper/Washer System, Checking and Adjusting Spray Nozzles

Special tools and workshop equipment required



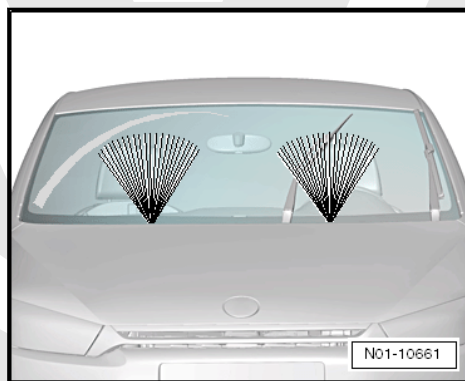
- ♦ Windshield Wash Aiming Tool -T10127- equipped with Replacement Tips -3125/ 5 A-



Note

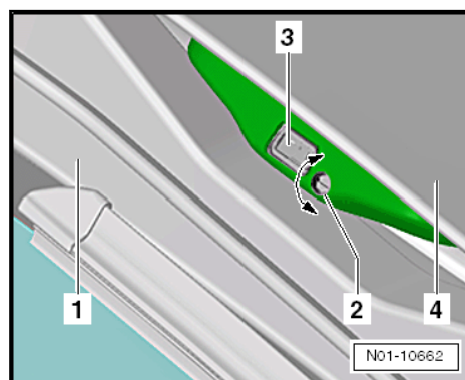
In cases where contamination in spray jet results in an uneven spray pattern, remove the spray jet and rinse it with water in the opposite direction of the spray flow. Cleaning with compressed air in the opposite direction of the spraying direction is permitted afterward. Do not use any other objects to clean the washer nozzles.

Windshield spray nozzle adjustment:



The washer nozzles are preset. Small height adjustments can be made.

- If both spray fields are not at same height, adjust spray direction upward or downward as follows:



- 1 - Cowl Panel Plate in Front of Windshield
- 2 - Adjuster TORX size 8
- 3 - Spray Nozzle

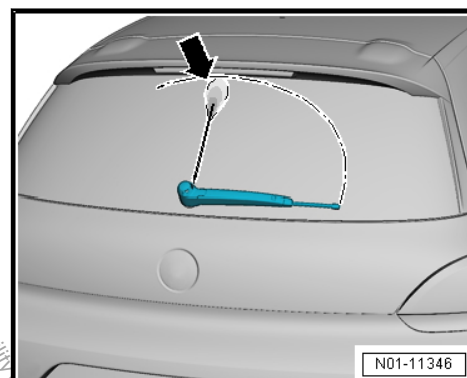


4 - Hood

- Adjust the spray nozzle -3- by turning at the adjuster -2- with a Torx screwdriver.
- ◆ "Clockwise" lower adjustment.
- ◆ "Counter-clockwise" higher adjustment.

Rear Window Washer Nozzle Adjustment

- Adjust the washer nozzle using the Washer Jet Setting Tool -T40187- so that the fluid sprays onto the upper third of the rear window as shown.



4.46.3 Headlamp Washer System, Checking Washer Nozzle Adjustment

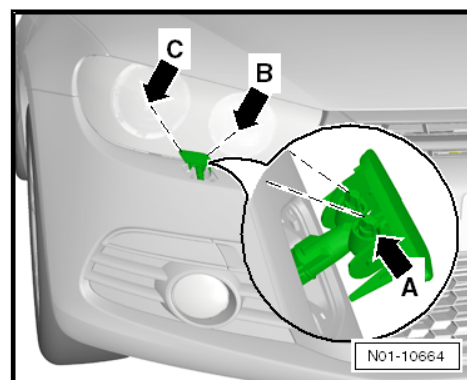


Caution

The washer nozzles can be checked for functionality, but they cannot be adjusted.

Nozzle Adjustment, Checking

- Turn on the low beam.
- Operate the windshield washer system.



The headlamps are washed when the windshield wiper lever is held in "wipe position" for at least 1.5 seconds.

The spray must hit the headlamp glass directly in the center -B- and -C-.

If the spray pattern differs from the specification, perform a repair procedure.



Note

The test pattern is also used for vehicles with halogen head-lamps.

4.47 Windshield Wiper Blades, Checking Park Position

⇒ [W4.47.1 Wiper Blades, Checking Park Position", page 244](#)

⇒ [W4.47.2 Wiper Blades, Checking Park Position, Golf Wagon from MY 2007", page 245](#)

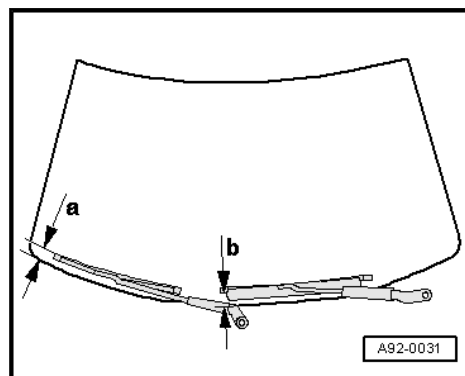
p

4.47.1 Windshield Wiper Blades, Checking Park Position



Note

- ◆ For every second switching off the windshield wiper motor runs in a excess end position, that make sure that the lips of the wiper blade are bent in the other direction.
 - ◆ To do so the windshield wiper motor runs in the end position downward and then slightly upward. This excess end position must not be used to align/install the windshield wiper motor crank.
 - ◆ Use the end position to check, by which the windshield wiper motor runs directly and without under-stroke into the end position. If necessary operate the one-touch wiping again.
- Switch on and off the windshield wiper and let it run in the end position.
 - Switch off the ignition.
 - Check if the windshield wiper blade tips are positioned with the following distances to the plenum chamber cover grille at the bottom of the windshield:



- ◆ Dimension -a- = 0 to 60 mm
- ◆ Dimension -b- = 10 to 20 mm
- Adjust the wiper arm if necessary:

Adjust the wiper blades. Refer to ⇒ Electrical Equipment; Rep. Gr. 92; Wiper Blades - Park Position.

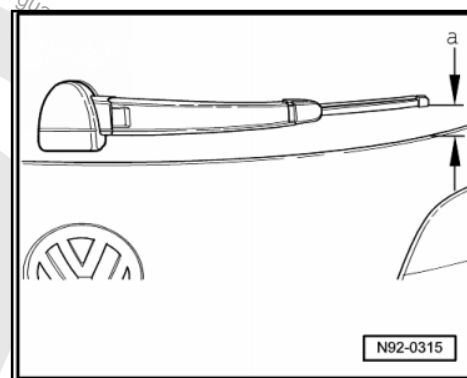


Note

The layout is similar for "RHD" vehicles.

4.47.2 Rear Wiper Blades, Checking Park Position, Golf Wagon from MY 2007

- Switch rear windshield wipers on and off and allow to run to end position.
- Check whether blade point rests in with the following distance to lower edge of window.



◆ Dimension $a = 15 + 5 \text{ mm}$

- Adjust the wiper arm if necessary. Refer to the repair manual »Vehicle Electrical System/Electrical Equipment«⇒ Electrical Equipment; Rep. Gr. 92; Windshield Wiper Blades - Park Position»Windshield Wiper and Washer System; Rear Window Wiper System, Adjusting Park Position«.

4.48 Windshield Wiper Protectors, Removing

⇒ [W4.48.1 Wiper Protectors, Removing, Version 1", page 247](#)

⇒ [W4.48.2 Wiper Protectors, Removing, Version 2", page 248](#)

⇒ [W4.48.3 Wiper Protectors, Changing Transport Wiper Blade, Version 3", page 249](#)

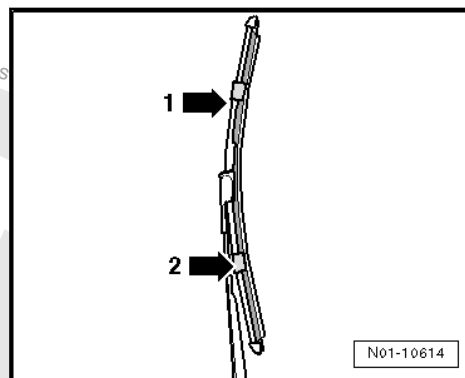


Note

There are three versions of windshield wiper protectors:



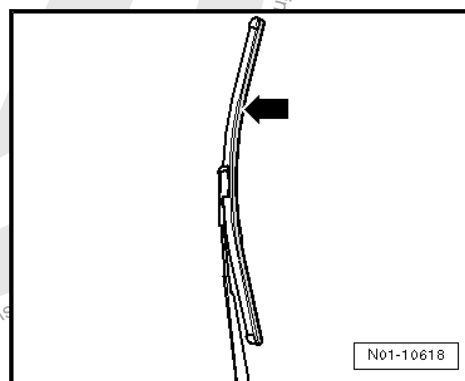
1. Wiper blade with a protective rail and two fasteners



- ♦ Can be recognized by the protective rails with the two fasteners -arrows 1 + 2-.

Refer to ➔ [W4.48.1 Wiper Protectors, Removing, Version 1", page 247](#)

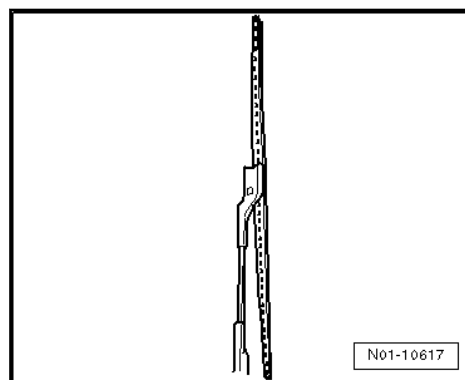
2. Wiper blade with protective rail, which can be pushed on



- ♦ Characteristic: protective rail -arrow- pushed onto the wiper blade

Refer to ➔ [W4.48.2 Wiper Protectors, Removing, Version 2", page 248](#)

3. Transport wiper blade version



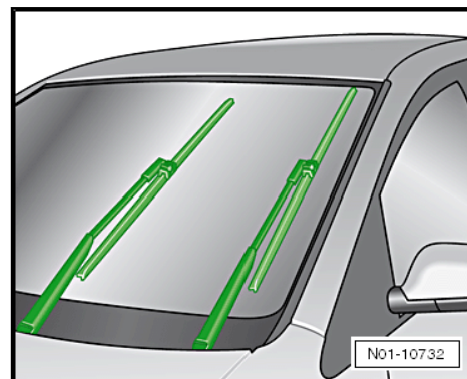
- ♦ Characteristics: does not have a wind deflector and must be exchanged for the standard wiper blade.



Refer to ➤ [W4.48.3 Wiper Protectors, Changing Transport Wiper Blade, Version 3", page 249](#)

4.48.1 Windshield Wiper Protectors, Removing, Version 1

- With the engine hood closed, switch the ignition on and off briefly.



- Within 10 seconds after switching off the ignition, move the windshield wiper lever downward to the one-touch wiping position.

The wipers move into the service position.

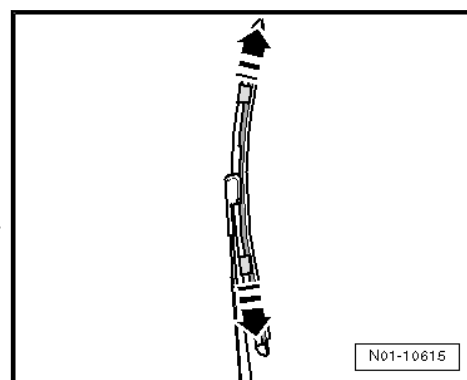
- Lift the wiper arm off the glass.



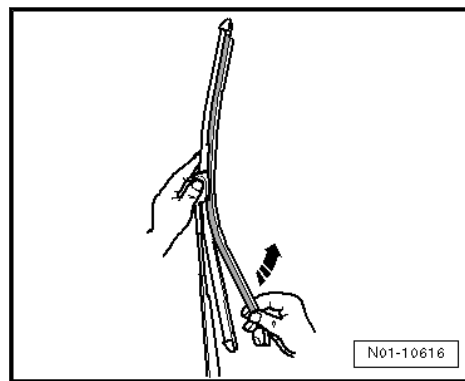
Caution

Do not hold the wiper blade to prevent damage.

- Remove the upper fastener upward and the lower fasteners downward -arrows-.



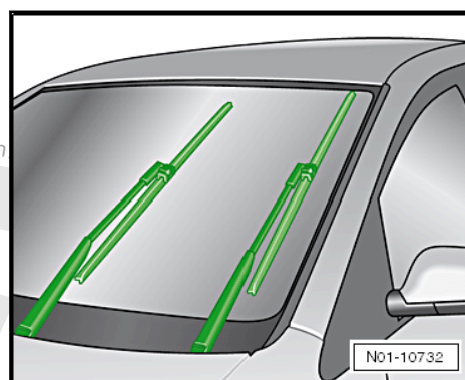
- Remove the protective shield off the wiper blade from the bottom upward as shown.



- Carefully place the wiper arm back on the windshield.
- Move the wipers into the end position: turn on the ignition and operate the windshield wiper lever briefly. Turn off the ignition.

4.48.2 Windshield Wiper Protectors, Removing, Version 2

- With the hood closed, switch the ignition on and off briefly.



- Within 10 seconds after switching off the ignition, move the windshield wiper lever downward to the one-touch wiping position.

The wipers move into the service position.

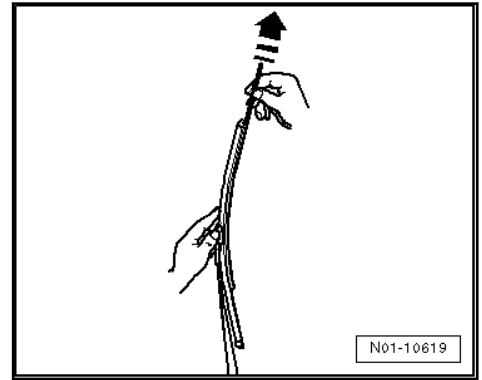
- Lift the wiper arm off the glass.



Caution

Do not hold the wiper blade to prevent damage.

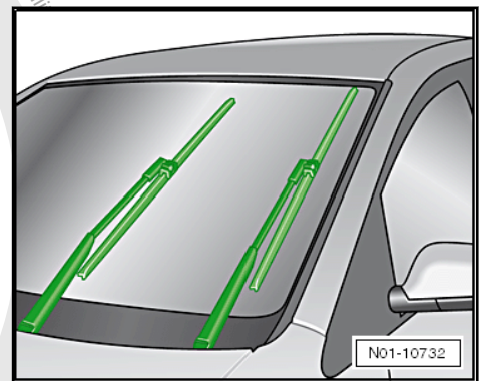
- Remove the protective rail off the wiper blade as shown.



- Carefully place the wiper arm back on the windshield.
- Move the wipers into the end position: turn on the ignition and operate the windshield wiper lever briefly. Turn off the ignition.

4.48.3 Windshield Wiper Protectors, Changing Transport Wiper Blade, Version 3

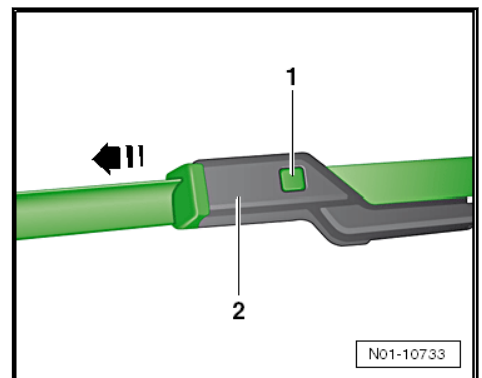
- With the hood closed, switch the ignition on and off briefly.



- Within 10 seconds after switching off the ignition, move the windshield wiper lever downward to the one-touch wiping position.

The wipers move into the service position.

- Lift the wiper arms off the glass.
- Depending on the version, turn the wiper blade so that the lip faces up and then remove it. Press the lock -1- in the retainer -2- and loosen the wiper blade on the joint and then remove the wiper blade.





- Slide the wiper blade into the retainer making sure the lock audibly engages. Or turn the wiper blade with the lip facing downward.



Caution

Do not touch the wiper blade to prevent damage.

- Carefully place the wiper arm back on the windshield.
- Move the wipers into the end position: turn on the ignition and operate the windshield wiper lever briefly. Turn off the ignition.

4.49 Halogen Headlamp Adjustment, Checking and Adjusting if Necessary

⇒ [a4.49.1 nd Adjustment Requirements", page 250](#)

⇒ [A4.49.2 djustment, Checking \(ECE\)", page 250](#)

⇒ [A4.49.3 djustment, Checking \(SAE\)", page 251](#)

⇒ [H4.49.4 eadlamp, Adjusting Hella Manufacturer", page 253](#)

⇒ [H4.49.5 eadlamp, Adjusting, Valeo Manufacturer", page 254](#)



Note

- ◆ *The use of additional weight is discontinued.*
- ◆ *For that reason, different angle dimension settings are used on the headlamp adjusting unit.*
- ◆ *When using the maintenance tables, the adjustment values are also shown in the vehicle-specific maintenance list.*
- ◆ *In the US, Canadian, and Mexican markets, headlamps with SAE approval are used in vehicles.*
- ◆ *Adjusting the headlamps is invoiced separately.*

4.49.1 Testing and Adjustment Requirements:

- Tire pressure OK
- Cover lenses must not be damaged or dirty.
- Reflectors and bulbs OK
- Move vehicle back and forth for a few meters or bounce the front and rear of vehicle several times up and down to settle the springs.
- The vehicle and the headlamp adjusting unit must be on level ground.
- Vehicle and headlamp adjusting unit must be aligned.
- Angle dimension must be set.
- Pay attention to the ⇒ Headlamp Adjusting Unit Owner's Manual.

4.49.2 Headlamp Adjustment, Checking (ECE)

Special tools and workshop equipment required




- ◆ Headlamp Adjusting Unit -VAS 5046 A-
- ◆ Headlamp Adjusting Unit -VAS 5047 A-
- ◆ Headlamp Adjusting Unit -VAS 5208 A-



Note

For certain markets, no manual headlamp range control is offered with halogen headlamps.

- Check the headlamp height adjustment by setting to the maximum level and observing the light.
- Then set the thumbwheel for the headlamp range control to the  position, if equipped.

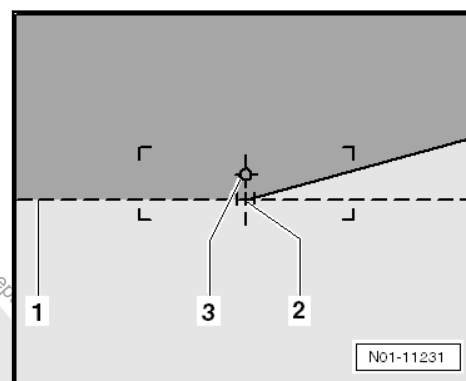
The adjustment of the angle dimension on headlamp adjusting unit is based on the fuel tank fill level.

Angle Dimension for Halogen Headlamp ECE

Fuel gauge level	Angle dimension
0 to 1/2	1.2 %
1/2 to 1	1.0 %

Check the following:

- With the low beam switched on, check whether the horizontal cut-off line contacts the test surface dividing line -1- and



- If the bend point -2- runs vertically through the central point -3- between the left horizontal part and the rising part on the right of the cut-off line. The bright core of the light beam must be on the right of the vertical line.



Note

After adjusting the low beam according to the instructions, the center of the high beam light beam must lie on the center mark -3-.

4.49.3 Headlamp Adjustment, Checking (SAE)

Special tools and workshop equipment required

- ◆ Headlamp Adjusting Unit -VAS 5046 A-






- ◆ Headlamp Adjusting Unit -VAS 5047 A-
- ◆ Headlamp Adjusting Unit -VAS 5208 A-



Note

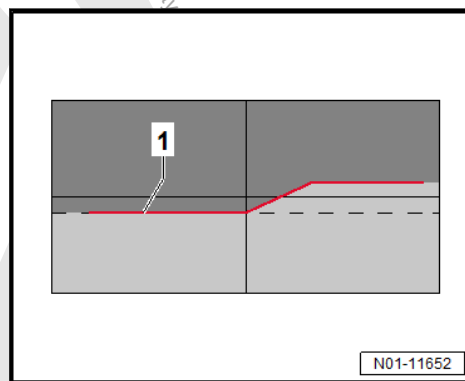
- ◆ *The designation VOL/VOR is visible on the headlamp from the exterior.*
 - ◆ *The sideways adjustment is sealed on SAE headlamps.*
 - ◆ *For certain markets, no manual headlamp range control is offered with halogen headlamps.*
- Check the headlamp height adjustment by setting to the maximum level and observing the light.
 - Then set the thumbwheel for the headlamp range control to the  position, if equipped.

The adjustment of the angle dimension on headlamp adjusting unit is based on the fuel tank fill level.

Angle Dimension for SAE VOL Halogen Headlamps

Fuel gauge level	Angle dimension
0 to 1/2	0.9 %
1/2 to 1	0.7 %

VOL: visual optical aim left -1-

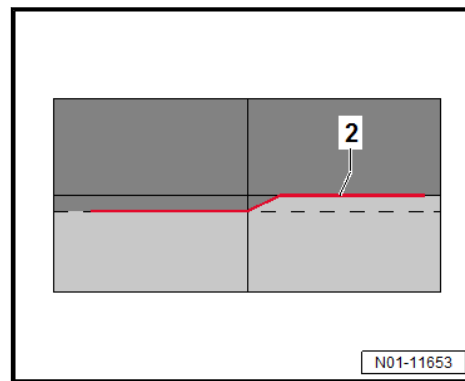


- Check if the left level cut-off line contacts the dividing line -1- on the headlamp adjusting unit test surface.

Angle dimension for SAE VOR halogen headlamp

Fuel gauge level	Angle dimension
0 to 1/2	0.2 %
1/2 to 1	0.0 %

VOR: visual optical aim right -2-



- Check if the right level cut-off line contacts the dividing line -2- on the headlamp adjusting unit test surface.

4.49.4 Halogen Headlamp, Adjusting »Hella« Manufacturer



Note

Make sure, if present, both headlamps work identically when operating the manual headlamp range control.

- Adjust the corresponding angle dimension on the headlamp adjusting unit. Refer to [⇒ A4.49.2 adjustment, Checking \(ECE\)](#), page 250 for ECE headlamps, or refer to [⇒ A4.49.3 adjustment, Checking \(SAE\)](#), page 251 for SAE headlamps.



Note

Percentage information is based on a projection distance of 10 meters.



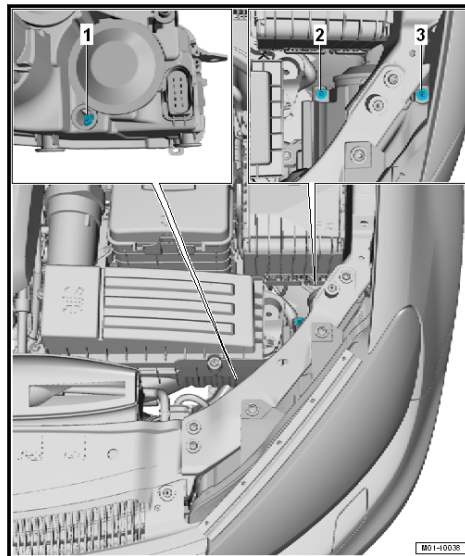
WARNING

On hybrid vehicles visually inspect the hybrid components in the work area. Refer to [⇒ C4.23 components, Visually Inspecting for Damage of the High-Voltage Components and Wires](#), page 137.

Contact to the responsible high-voltage technician or expert if something needs clarification.

Left Headlamp, Adjusting:

Adjusting screws for the right headlamp are a mirror image.



- ◆ Adjusting screw (inner hex socket) for height adjustment of low beam cut-off line -2-.
- ◆ Adjusting Screw (Inner Hex Socket) for Lateral Adjustment of Low Beam Cut-Off Line -3- (Sealed on NAR Vehicles)
- Turn the low beam height adjustment adjusting screw -2- until the correct setting is achieved.



Note

In some markets the lateral adjustment adjusting screw -3- is sealed. Lateral adjustment is not permitted.

- Turn the adjustment screw for lateral adjustment -3- until the correct setting is achieved.
- Then check the side adjustment and correct using the adjusting screw -3- if necessary.

High beams separate height adjustment

With the low beams adjusted "correctly" it may be necessary to correct the height adjustment of the high beams.

Special tools and workshop equipment required

- ◆ Mirror
- Remove the closure cap in front of the adjusting screw -1-.
- Turn the high beam height adjustment adjusting screw -1- until the correct setting is achieved.

4.49.5 Halogen Headlamp, Adjusting, »Valeo« Manufacturer



Note

Make sure, if present, both headlamps work identically when operating the manual headlamp range control.

- Adjust the corresponding angle dimension on the headlamp adjusting unit. Refer to [⇒ A4.49.2 adjustment, Checking \(ECE\)](#), page 250 for ECE headlamps, or refer to [⇒](#)



[A4.49.3 djustment, Checking \(SAE\)", page 251](#) for SAE headlamps.

i Note

Percentage information is based on a projection distance of 10 meters.



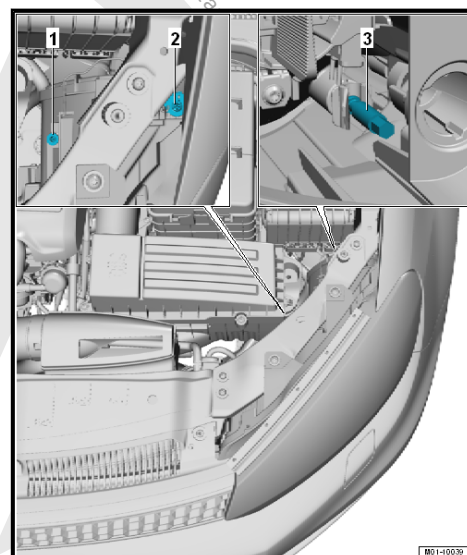
WARNING

On hybrid vehicles visually inspect the hybrid components in the work area.

Contact to the responsible high-voltage technician or expert if something needs clarification.

Left Headlamp, Adjusting:

Adjusting screws for the right headlamp are a mirror image.



- ◆ Adjusting screw (inner hex socket) -1- for height adjustment of low beam cut-off line.
- ◆ Adjusting screw (inner hex socket) -2- for lateral adjustment of low beam cut-off line (sealed on NAR vehicles)
- Turn the height adjustment adjusting screw -1- until the correct setting is achieved.

i Note

In some markets the lateral adjustment adjusting screw -2- is sealed. Lateral adjustment is not permitted.

- Turn the lateral adjustment adjusting screw -2- until the correct setting is achieved.
- Then check the side adjustment and correct using the adjusting screw -2- if necessary.

Separate height adjustment of the low beams

It may be necessary, to correct the height adjustment of the low beams in relation to the high beams.



Note

For clarity a headlamp is shown without the headlamp beam adjustment motor

Special tools and workshop equipment required

- ◆ Mirror
- Remove the closure cap for the low beams.
- Switch on the high beam.
- Adjust the angle dimension on the Headlamp Adjusting Unit to "0 %".
- Adjust the high beams with the adjusting screw -1- to »maximum« of the central point for halogen headlamp ECE -3- (refer to [⇒ A4.49.2 djustment, Checking \(ECE\)", page 250](#)) or SAE -2- (refer to [⇒ A4.49.3 djustment, Checking \(SAE\)", page 251](#)).
- Adjust the angle dimension on the Headlamp Adjusting Unit according to the angle dimension specified value.
- Turn the height adjustment adjusting screw for the low beams -3- until the cut-off line for the halogen headlamp ECE (refer to [⇒ A4.49.2 djustment, Checking \(ECE\)", page 250](#)) -1- or SAE (refer to [⇒ A4.49.3 djustment, Checking \(SAE\)", page 251](#)) is reached.
- Turn the adjusting screw -2- for the low beam side adjustment until the bend point for the EEC halogen headlamp (refer to [⇒ A4.49.2 djustment, Checking \(ECE\)", page 250](#)) in -2- runs vertically through the central point -3- between the left horizontal part and the right ascending part of the cut-off line. The bright core of the light beam must be on the right of the vertical line.

Assembly of the headlamp is done in the reverse order.

4.50 Fog Lamps and Auxiliary Headlamps, Checking and Adjusting if Necessary

[⇒ a4.50.1 nd Adjusting Conditions", page 256](#)

[⇒ C4.50.2 hecking Adjustment", page 257](#)

[⇒ L4.50.3 amps and Other Auxiliary Headlamps, Adjusting", page 257](#)



Note

- ◆ *The use of additional weight is discontinued.*
- ◆ *For that reason, different angle dimension settings are used on the headlamp adjusting unit.*
- ◆ *When using the maintenance tables, the adjustment values are also shown in the vehicle-specific maintenance list.*
- ◆ *Adjusting the headlamps is invoiced separately.*

4.50.1 Checking and Adjusting Conditions

- Tire pressure OK
- Cover lenses must not be damaged or dirty.



- Reflectors and bulbs OK
- Move vehicle back and forth for a few meters or bounce the front and rear of vehicle several times up and down to settle the springs.
- The vehicle and the headlamp adjusting unit must be on level ground.
- Vehicle and headlamp adjusting unit must be aligned.
- Angle dimension must be set.
- Pay attention to the ⇒ Headlamp Adjusting Unit Owner's Manual.

4.50.2 Headlamps, Checking Adjustment

Special tools and workshop equipment required

- ◆ Headlamp Adjusting Unit -VAS 5046 A-
- ◆ Headlamp Adjusting Unit -VAS 5047 A-
- ◆ Headlamp Adjuster -VAS 5208A-

The adjustment of the angle dimension on headlamp adjusting unit is based on the fuel tank fill level.

Angle dimension for fog lamp

Fuel gauge level	Angle dimension
0 to 1/2	2.0 %
1/2 to 1	2.0 %

Fog lamps:

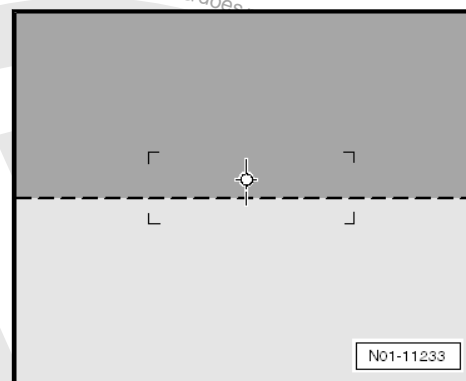
- Check whether the upper cut-off line touches the adjustment line and runs horizontally across the entire width of the test screen.

Other auxiliary headlamps:

Retrofitted auxiliary headlamps of other systems must be checked and adjusted according to the guidelines applicable to them.

4.50.3 Fog Lamps and Other Auxiliary Headlamps, Adjusting

Fog lamp and other auxiliary headlamp, adjusting, Golf from MY 2007, Jetta from MY 2005. Refer to ⇒ [page 258](#).





Fog lamp and other auxiliary headlamp, adjusting, Golf from MY 2010, Jetta from MY 2011. Refer to ➔ [page 259](#).

Fog lamp and other auxiliary headlamp, adjusting, Golf from MY 2007, Jetta from MY 2005

Left fog lamp in bumper

The adjusting screw on the right fog lamp is a mirror image.

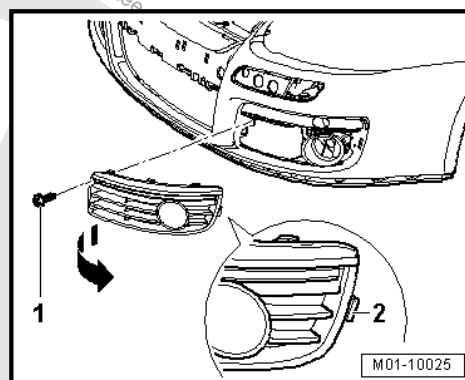
- Adjust the angle dimension on the headlamp adjusting unit.



Note

Percentage information is based on a projection distance of 10 meters.

- Remove the bolt -1- 1.5 Nm.



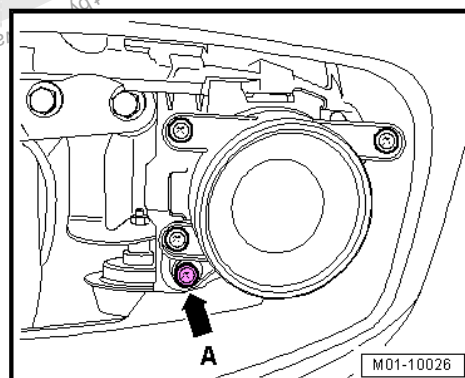
- Turn the air grille carefully in the -direction of the arrow- so that the outer retaining tab -2- does not break.



Note

The retaining tabs are somewhat strongly stuck. Pull on the cover with greater care to no break the retaining tabs.

- Turn the adjusting screw -arrow A- to adjust the beam height.



- Securing the air grille is identical in reverse order.
- Tighten the air grille bolt 1-- to 1.5 Nm.

Lateral adjustment is not possible.



Other Auxiliary Headlamps

Retrofitted auxiliary headlamps of other systems must be checked and adjusted according to the guidelines applicable to them.

Fog lamp and other auxiliary headlamp, adjusting, Golf from MY 2010, Jetta from MY 2011

Right Fog Lamp in Bumper

The adjusting screw on left fog lamp is a mirror image.

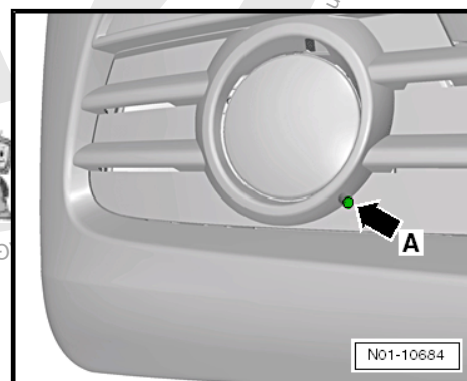
- Adjust the angle dimension on the headlamp adjusting unit.



Note

Percentage information is based on a projection distance of 10 meters.

- Turn the adjusting screw -arrow A- to adjust the beam height.



Lateral adjustment is not possible.

Other Auxiliary Headlamps

Retrofitted auxiliary headlamps of other systems must be checked and adjusted according to the guidelines applicable to them.



4.51 HID Headlamp Adjustment, Checking and Adjusting If Necessary

⇒ [4.51.1 nd Adjusting Conditions", page 260](#)

⇒ [A4.51.2 djustment, Checking \(ECE\)", page 260](#)

⇒ [A4.51.3 djustment, Checking \(SAE\)", page 261](#)

⇒ [H4.51.4 eadlamps, Adjusting", page 263](#)



Note

- ◆ *The use of additional weight is discontinued.*
- ◆ *For that reason, different angle dimension settings are used on the headlamp adjusting unit.*
- ◆ *When using the maintenance tables, the adjustment values are also shown in the vehicle-specific maintenance list.*
- ◆ *In the US, Canadian, and Mexican markets, headlamps with SAE approval are used in vehicles.*
- ◆ *Adjusting the headlamps is invoiced separately.*

4.51.1 Checking and Adjusting Conditions

- Tire pressure OK
- The headlamp glass must not be damaged or dirty.
- Reflectors and light sources OK
- Initialization phase of the headlamp range control must be completed. ¹⁾
- Move vehicle back and forth for a few meters or bounce the front and rear of vehicle several times up and down to settle the springs.
- The vehicle and the headlamp adjusting unit must be on level ground.
- Vehicle or headlamp adjusting unit must be aligned.
- Angle dimension must be set.
- The DTC memory must be erased.
- The headlamp adjusting unit if equipped must be located in the correct adjustment mode.
- Pay attention to the ⇒ Headlamp Adjusting Unit Owner's Manual.

¹⁾ A referencing operation occurs for the headlamp range control stepper motors in the dimming direction during the initialization phase. The headlamp range control initialization occurs after the vehicle engine start or terminal 15 connection is established.

4.51.2 Headlamp Adjustment, Checking (ECE)

Special tools and workshop equipment required

- ◆ Headlamp Adjusting Unit -VAS 5046 A-
- ◆ Headlamp Adjusting Unit -VAS 5047 A-
- ◆ Headlamp Adjusting Unit -VAS 5208 A-



◆ Vehicle Diagnostic Tester

The adjustment of the angle dimension on headlamp adjusting unit is based on the fuel tank fill level.

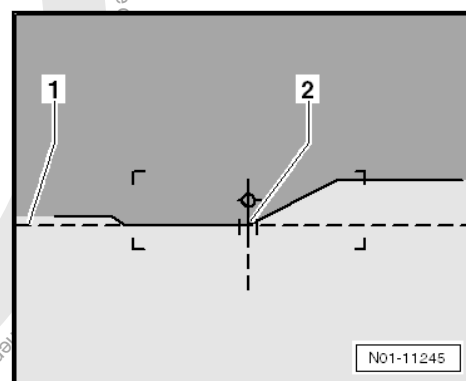
Angle dimension for ECE HID headlamp, LED headlamp and dynamic light assist headlamp

Fuel gauge level	Angle dimension
0 to 1/2	1.0 %
1/2 to 1	1.0 %

Test diagram for low beam

Check the following:

- The lowest part of the horizontal cut-off line must touch the test surface dividing line -1- when the low beams are on.



- The bend point -2- between the left horizontal part and the right ascending part of the cut-off line should run vertically through the central point.



Note

To make it easier to determine the bend point -2-, cover and uncover the left half of headlamp (as seen in driving direction), alternating a few times. Then check the low beam again.

4.51.3 Headlamp Adjustment, Checking (SAE)

Special tools and workshop equipment required

- ◆ Headlamp Adjusting Unit -VAS 5046 A-
- ◆ Headlamp Adjusting Unit -VAS 5047 A-
- ◆ Headlamp Adjusting Unit -VAS 5208 A-
- ◆ Vehicle Diagnostic Tester



Note

- ◆ *The designation VOL/VOR is visible on the headlamp from the exterior.*
- ◆ *The sideways adjustment is sealed on SAE headlamps.*

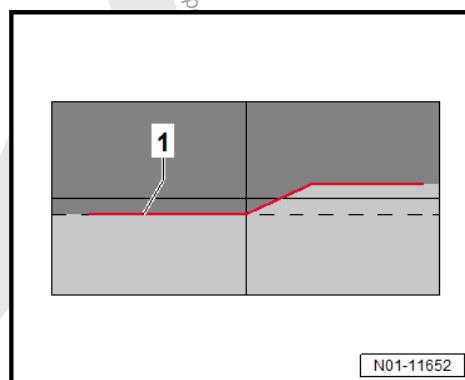


The adjustment of the angle dimension on headlamp adjusting unit is based on the fuel tank fill level.

Angle dimension for SAE VOL HID headlamp, LED headlamp and dynamic light assist headlamp

Fuel gauge level	Angle dimension
0 to 1/2	0.7 %
1/2 to 1	0.7 %

VOL: visual optical aim left -1-

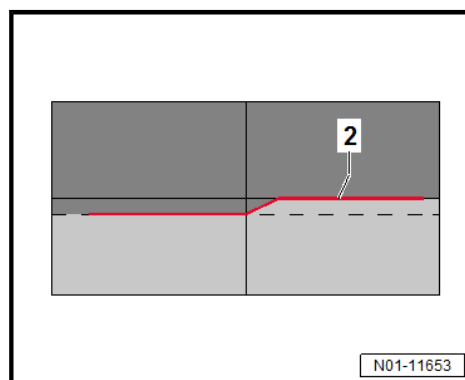


- Check if the left level cut-off line contacts the dividing line -1- on the headlamp adjusting unit test surface.

Angle dimension for SAE VOR HID headlamp, LED headlamp and dynamic light assist headlamp

Fuel gauge level	Angle dimension
0 to 1/2	0.0 %
1/2 to 1	0.0 %

VOR: visual optical aim right -2-



- Check if the right level cut-off line contacts the dividing line -2- on the headlamp adjusting unit test surface.



4.51.4 HID Headlamps, Adjusting

Headlamp Range Control, Performing Basic Setting:



Note

If the displays indicated in the procedure are not shown on the display, refer to the ➔ Vehicle Diagnostic Tester Operating Instructions.

ODIS Service
– Connect the Vehicle Diagnostic Tester. Refer to ➔ D3.5 iagnostic Tester, Connecting , page 57 .
– Switch the ignition on.
– Perform the vehicle identification.
– Enter the order data or select “no order”.
– Select “control module”.
– Select “headlamp range control”.
– Select “Guided Functions”.
– Select “basic setting”.
– Follow the “Guided Functions” instructions.

Right Headlamp, Adjusting:

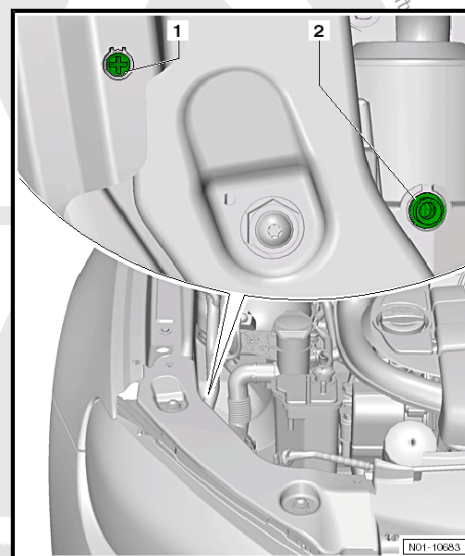


WARNING

On hybrid vehicles visually inspect the hybrid components in the work area. Refer to ➔ [C4.23 omponents, Visually Inspecting for Damage of the High-Voltage Components and Wires](#), page 137 .

Contact to the responsible high-voltage technician or expert if something needs clarification.

Adjusting screws for left headlamp are a mirror image.



- ♦ Adjusting screw (inner hex socket) for lateral adjustment of low beam cut-off line -1- (sealed on NAR vehicles)



- ◆ Adjusting screw (inner hex socket) for height adjustment of low beam cut-off line -2-.
- Turn the adjusting screw for height adjustment -2- until the correct setting is achieved.



Note

The lateral adjustment adjusting screw -1- is sealed in some markets. Lateral adjustment is not permitted.

- Turn the lateral adjustment adjusting screw -1- until the correct setting is achieved.
- Then check the side adjustment and correct using the adjusting screw -1- if necessary.



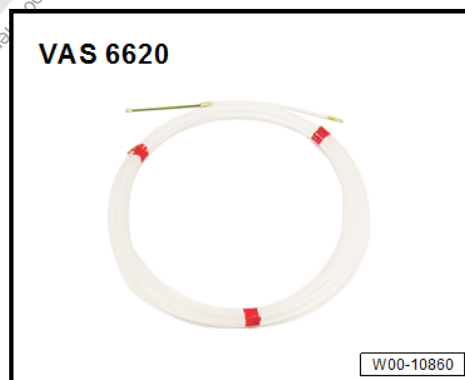
Note

- ◆ *Adjusting the left headlamp is in the same sequence.*
- ◆ *The adjusting screws for left headlamp are a mirror image.*

4.52 Sunroof Water Drains, Checking for Clearance and Cleaning

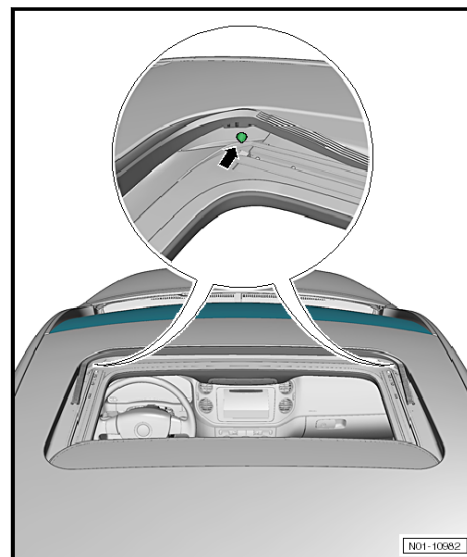
Special tools and workshop equipment required

- ◆ Drain Snake -VAS 6620-



Perform the following procedure:

- Open the sliding sunroof.
- Make sure the sunroof drain holes -arrows- are not blocked with dirt. Clean them if necessary.



- Using tap water, pour water through the sunroof water drain making sure the same amount of water is coming out of the wheel housing.

If this is happening, then the check is completed. Perform the following only if just a little or no water leaks out of the wheel housings:

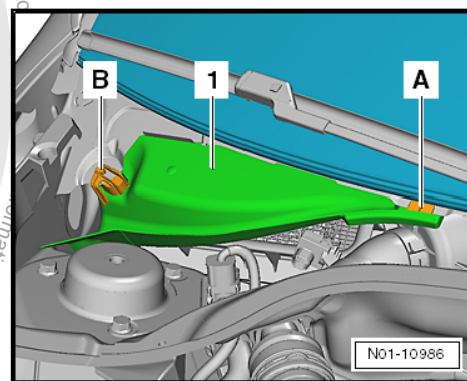
- Remove the plenum chamber cover. Refer to ➤ Body Exterior; Rep. Gr. 50; Plenum Chamber Cover



Note

Removing and installing the plenum chamber is a separate charge.

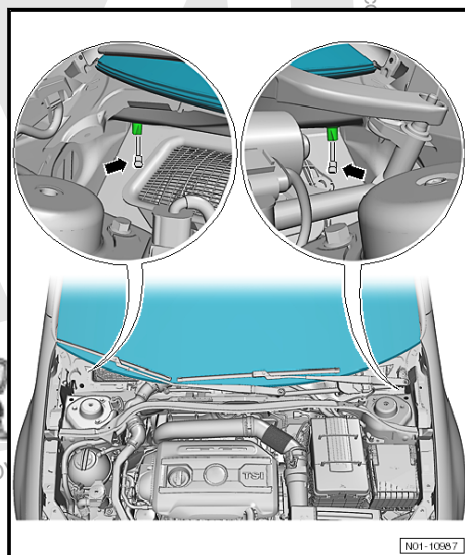
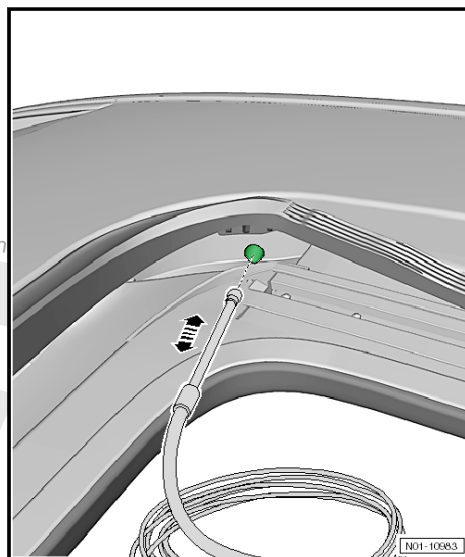
- If equipped, remove the cover -1- by loosening the retainers -A and B-.



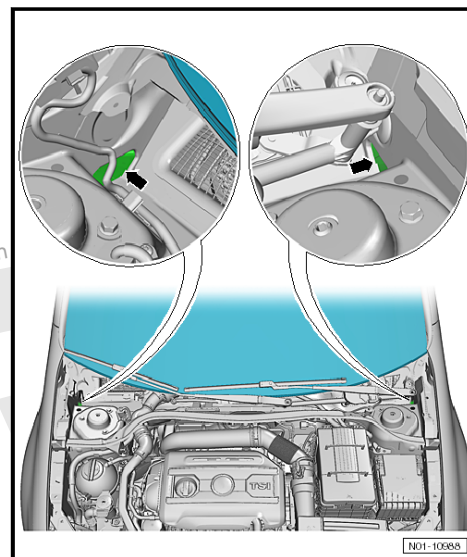
- Move the Drain Snake -VAS 6620- slowly back and forth up to the drain valves and push out any dirt.



- The drains -arrows- are located on the left and right sides of the plenum chamber.



- Make sure the plenum chamber drains -arrows- are not blocked with dirt. Clean them if necessary.



- Using tap water, pour water through the sunroof drain holes one more time.

Install in reverse order of removal.

4.53 Service Interval Display, Resetting and Coding

⇒ [I4.53.1 interval Display, Resetting with Vehicle Diagnostic Tester](#), page 267

⇒ [I4.53.2 interval Display, Resetting without Vehicle Diagnostic Tester, through MY 2013](#), page 268

⇒ [I4.53.3 interval Display, Resetting, without Vehicle Diagnostic Tester from MY 2014](#), page 269

⇒ [I4.53.4 interval Display, Coding](#), page 272

⇒ [I4.53.5 interval Display, Coding at the Pre-Delivery Inspection \(for North America\)](#), page 274

⇒ [I4.53.6 interval Display: Coding at The First Oil Change Service \(for North America\)](#), page 275

4.53.1 Service Interval Display, Resetting with Vehicle Diagnostic Tester

- Connect the Vehicle Diagnostic Tester. Refer to [⇒ D3.5 iag-nostic Tester, Connecting](#), page 57 .
- Switch the ignition on.
- Select »Guided Functions«.

If the displays indicated in the procedure are not shown on the display: ⇒ Operating Instructions for the vehicle diagnostic tester

- Select the following one after the other:

- ◆ Brand
- ◆ Type
- ◆ Model year
- ◆ Engine codes

- Confirm the VIN.

- Select the following one after the other:



Vehicles through MY 2013

- ◆ “Instrument Cluster”
- ◆ “Service Interval Display, Resetting”

Vehicles from MY 2014

- ◆ “Instrument Cluster”
- ◆ Select the corresponding service that is to be reset.

All vehicles

- Adapting according to “Guided Functions”.

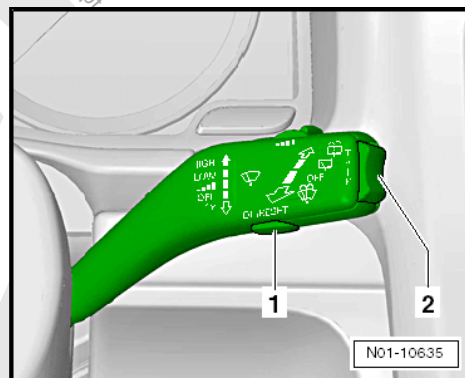
End Adaptation

- Select »go to« and then press »end«.
- Turn off the ignition and disconnect the diagnostic connector.
- Switch the ignition on.

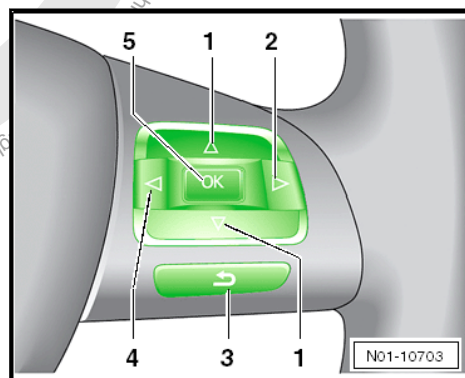
After switching on the ignition, service event is no longer indicated in the odometer display in the instrument panel insert.

4.53.2 Service Interval Display, Resetting without Vehicle Diagnostic Tester, through MY 2013

Using the rocker switch on the windshield wiper lever or the button in the multifunction steering wheel



- Using the rocker switch, select the “settings” menu, or
- Using the buttons on the multifunction steering wheel, select the “settings” menu.



- In the “Service” submenu, select the menu item “Reset” and then reset the service interval display by pressing the “OK”

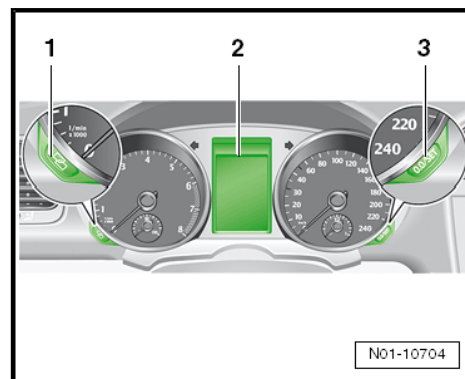


button -1- on the windshield wiper lever or in the multifunction steering wheel -5-.

- Press the “OK” button to confirm the confirmation prompt that follows.

Using the buttons in the instrument cluster

- With the ignition turned off, press and hold the button -3-.



- Switch the ignition on.
- Release the button -3- and briefly press the button for setting the clock -1- one time.

The service interval display is now in reset mode.

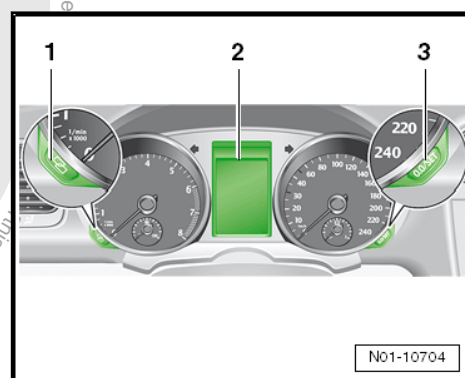
After a brief period, the display switches back to the normal display.

4.53.3 Service Interval Display, Resetting, without Vehicle Diagnostic Tester from MY 2014

Oil Change Service, Resetting:

Using the buttons in the instrument cluster.

- ◆ If the vehicle does not have an instrument cluster text display.
- With the ignition turned off, press the -3- button and hold it pressed.



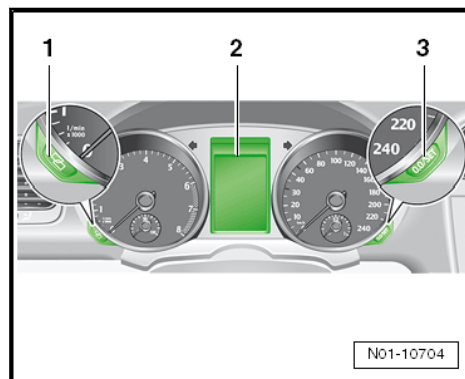
- Switch the ignition on.
- Release the button -3- and press the button -1- within 20 seconds.

The service interval display is now in reset mode.



After a brief period, the display switches back to the normal display.

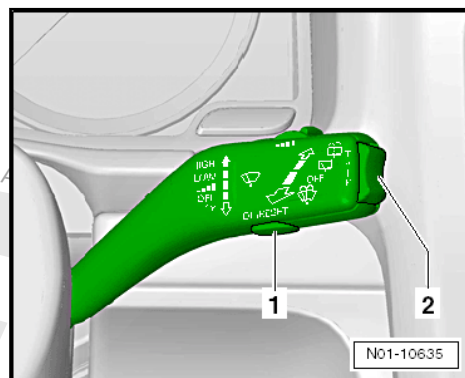
- ◆ If the vehicle does have an instrument cluster text display.
- With the ignition turned off, press the -3- button and hold it pressed.



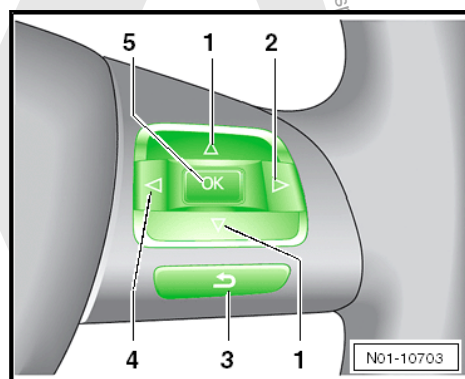
- Switch the ignition on.
- Release the button -3-.

The confirmation request appears in the instrument cluster display.

- By pressing the button -1- in the windshield wiper lever



- Or in the multifunction steering wheel by pressing the button -5- to confirm.



The service interval display is now in reset mode.

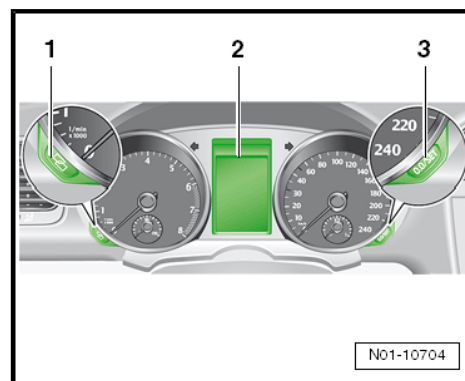
After a brief period, the display switches back to the normal display.



Resetting the inspection service.

Using the buttons in the instrument cluster.

- ◆ If the vehicle does not have an instrument cluster text display.
 - Switch off the ignition.
 - Emergency flasher switched on.
 - Press and hold the button -3-.

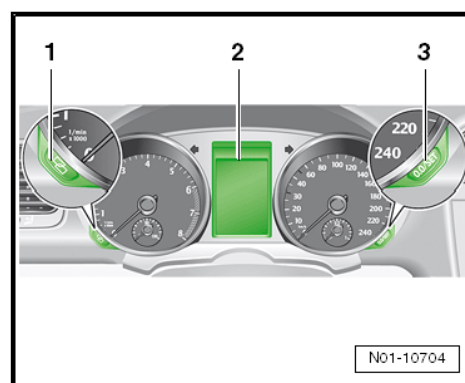


- Switch the ignition on.
- Release the button -3- and press the button -1- within 20 seconds.
- Turn off the emergency flasher.

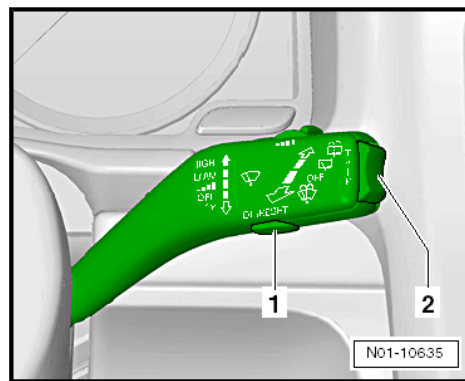
The service interval display is now in reset mode.

After a brief period, the display switches back to the normal display.

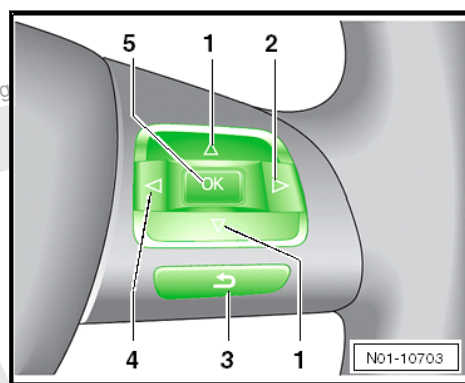
- ◆ If the vehicle does have an instrument cluster text display.
 - Switch off the ignition.
 - Emergency flasher switched on.
 - Press and hold the button -3-.



- Switch the ignition on.
 - Release the button -3-.
- The confirmation request appears in the instrument cluster display.
- By pressing the button -1- in the windshield wiper lever



- Or in the multifunction steering wheel by pressing the button -5- to confirm.



- Turn off the emergency flasher.

The service interval display is now in reset mode.

After a brief period, the display switches back to the normal display.

4.53.4 Service Interval Display, Coding

- Connect the Vehicle Diagnostic Tester. Refer to [D3.5 Diagnostic Tester, Connecting](#), page 57.
- Switch the ignition on.
- Touch: “Guided Functions” on the touch screen.



Note

If the displays indicated in the procedure are not shown on the display, refer to the ⇒ [Vehicle Diagnostic Tester Operating Instructions](#).

- Select the following one after the other:
 - ◆ Brand
 - ◆ Type
 - ◆ Model year
 - ◆ Engine codes
- Confirm the VIN.
- Select the following one after the other:
 - ◆ “Instrument Cluster”



- ◆ “Adapt service interval extension.”
- Adapting according to “Guided Functions”.

End Adaptation

- Select »go to« and then press »end«.
- Turn off the ignition and disconnect the diagnostic connector.

Change in the Km-maximum values for oil change service (fixed) during the delivery inspection.

- Connect the Vehicle Diagnostic Tester. Refer to [⇒ D3.5 iag-nostic Tester, Connecting](#), page 57 .
- Switch the ignition on.
- Touch: “Guided Functions” on the touch screen.



Note

If the displays indicated in the procedure are not shown on the display, refer to the ⇒ Vehicle Diagnostic Tester Operating Instructions.

- Select the following one after the other:
 - ◆ Brand
 - ◆ Type
 - ◆ Model year
 - ◆ Engine codes
- Confirm the VIN.
- Select the following one after the other:
 - ◆ “Instrument Cluster”
 - ◆ “Identify control module”
 - ◆ “Guided Functions”
 - ◆ “Oil change service (fixed)”
- Follow the “Guided Functions” instructions.
- “1” Reset Oil change service (fixed).
- Follow the “Guided Functions” instructions.

The current Km maximum values are displayed in the Vehicle Diagnostic Tester.

- Select “no”.
- Select the country-specific maximum value until the next oil change service.
- Adapting according to “Guided Functions”.

End Adaptation

- Select »go to« and then press »end«.
- Turn off the ignition and disconnect the diagnostic connector.



4.53.5 Service Interval Display, Coding at the Pre-Delivery Inspection (for North America)

- Connect the Vehicle Diagnostic Tester. Refer to ➔ [D3.5 iag-nostic Tester, Connecting](#), page 57.
- Switch the ignition on.
- Touch the “GUIDED FAULT FINDING” button/field on the screen.



Note

If the displays indicated in the procedure are not shown on the display, refer to the ➔ Vehicle Diagnostic Tester Owner's Manual.

- Select the following one after the other:

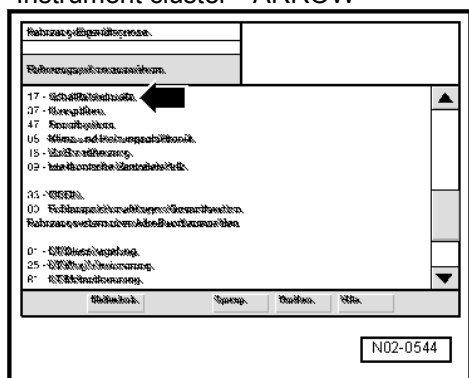
- ◆ Brand
- ◆ Type
- ◆ Model year
- ◆ Engine codes

- Confirm the VIN.

If the vehicle identification procedure was performed correctly, press to confirm.

- Select the following one after the other:

- ◆ Body
- ◆ Electrical system
- ◆ 01 - On Board Diagnostic (OBD) capable systems
- ◆ “Instrument cluster” -ARROW-



- ◆ Instrument cluster function
- ◆ “Service interval display adaptation”.



Note

- ◆ Check which interval is set.
- ◆ The interval must be set or coded for the first oil change service at 5,000 miles/ 9,000 km (5,592.3 miles).



- Perform the adaptation following the “GUIDED FAULT FINDING” prompts.

Note for vehicles from MY 2007:

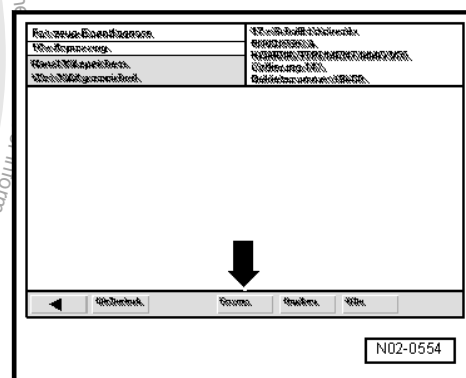


Note

- ◆ Applies to vehicles in USA and Canada market designation:
- ◆ Channel 50: 50 (= 5000 miles) for USA
- ◆ Channel 50: 80 (= 8000 km) for CDN
- ◆ Channel 51: 372 (= 372 days) for USA and CDN
- ◆ When coding to QG0 or QG2: channels 42 + 49 are not available and are replaced by channels 50 + 51.
- ◆ Additionally when coding QG0, QG2 the channels 43, 44 and 49 are also deactivated.

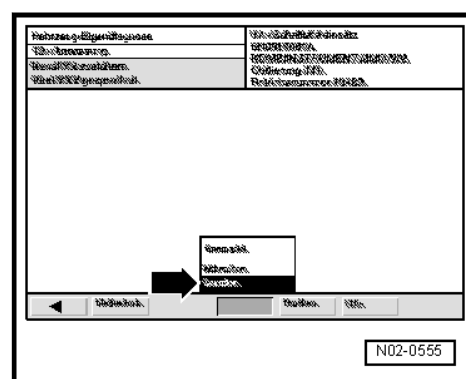
Ending the adaptation:

Indicated on the display:



- Press the »GO TO« button -arrow- on the display.

Indicated on the display:



- Press the »end« button -arrow- on the display.
- Turn off the ignition and disconnect the diagnostic connector.

4.53.6 Service Interval Display: Coding at The First Oil Change Service (for North America).

- Connect the Vehicle Diagnostic Tester. Refer to ➔ [D3.5 Diagnostic Tester, Connecting](#), page 57 .



- Switch the ignition on.
- Press the field / button “OBD” on the screen.



Note

If the displays indicated in the procedure are not shown on the display, refer to the ⇒ Vehicle Diagnostic Tester Owner's Manual.

- Select the following one after the other:

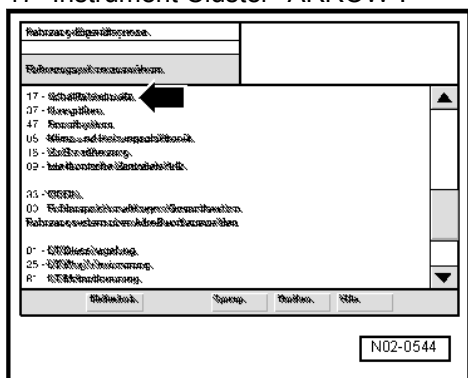
- ◆ Brand
- ◆ Type
- ◆ Model year
- ◆ Engine codes

- Confirm the VIN.

If the vehicle identification procedure was performed correctly, press to confirm.

- Select the following one after the other:

- ◆ 17 “Instrument Cluster”-ARROW-.



- ◆ 10 “Adaptation”

- Select channel 49.
- Enter 372.
- Select channel 42.
- Perform the adaptation following the “OBD” prompts.



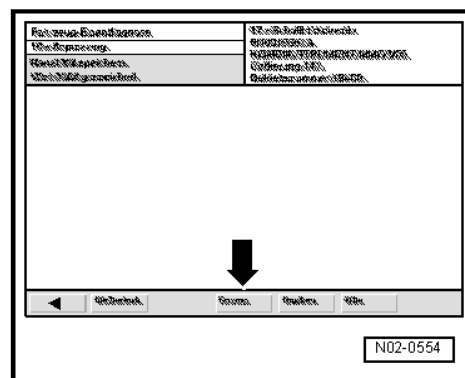
Note

- ◆ Applies to vehicles in USA and Canada market designation:
- ◆ Channel 42: 100 (= 10,000 miles) for USA
- ◆ Channel 42: 160 (= 16,000 km (10,000 miles)) for CDN
- ◆ Channel 49: 372 (= 372 days) for USA and CDN

Ending the adaptation:

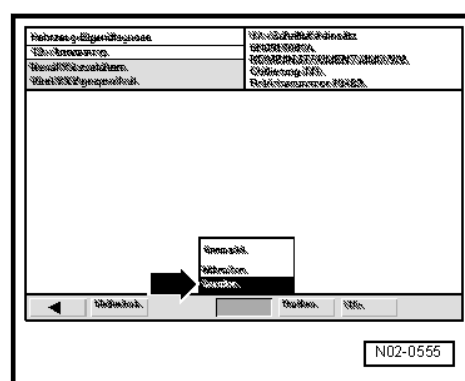
Indicated on the display:





- Press the “GO TO” button -arrow- on the display.

Indicated on the display:

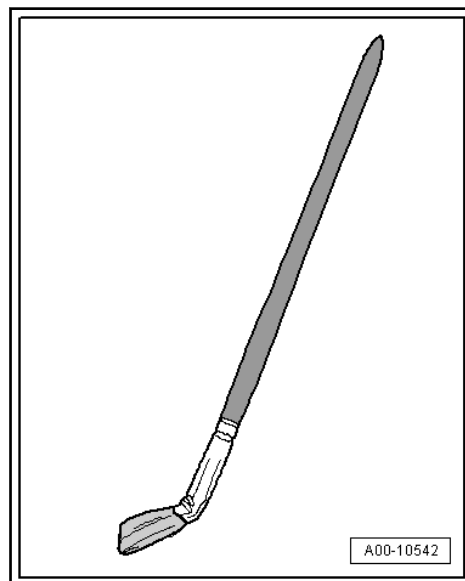


- Press the “end” button -arrow- on the display.
- Turn off the ignition and disconnect the diagnostic connector.

4.54 Sliding Sunroof, Checking Function, Cleaning and Lubricating Guide Rails

Special Tools and Equipment

- Lint-free cloths
- Brush
- Wet and Dry Vacuum Cleaner
- Lubricant -G 060 751 A2- for the guide rails.
- Krytox Lubricant -G 052 141 A2- for the seals.
- Isopropyl to clean the seals.



Note

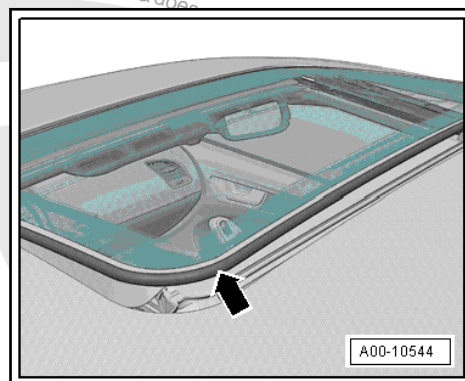
Paint brush (approximately 15 mm wide) (bend approximately 40°).



Caution

Hold a cloth under the respective places to protect the vehicle interior from debris.

Clean and coat the glass panel seal



- Install the glass sunroof panel.



Note

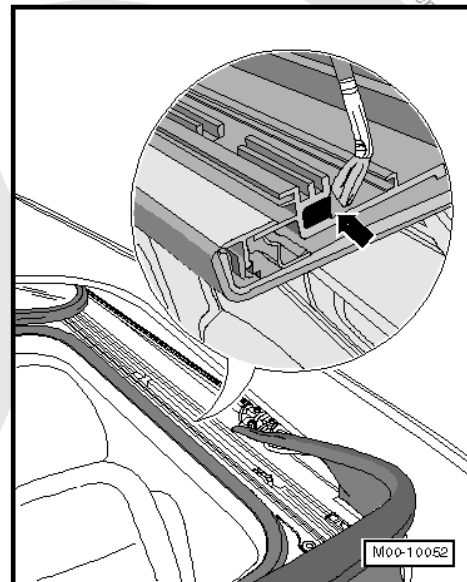
Lubricate the front part first with the glass panel open and the tilt the glass panel in the rear.

- Remove grease and dirt residue on the glass sunroof seal -arrow- using isopropyl and a lint-free cloth.
- Apply a »thin« layer of Krytox Lubricant -G 052 141 A2- as far as possible on the glass sunroof panel -arrow- with a commercially available paint brush.

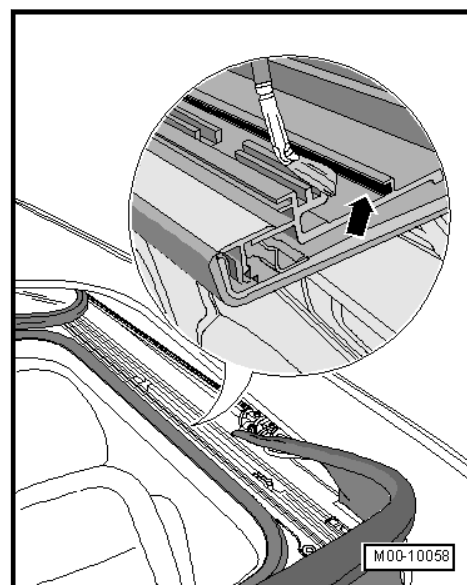


- After applying, make sure that there is »no visible white grease film« remaining.
- Wipe away any excess Krytox lubricant from the seal with a lint-free cloth.

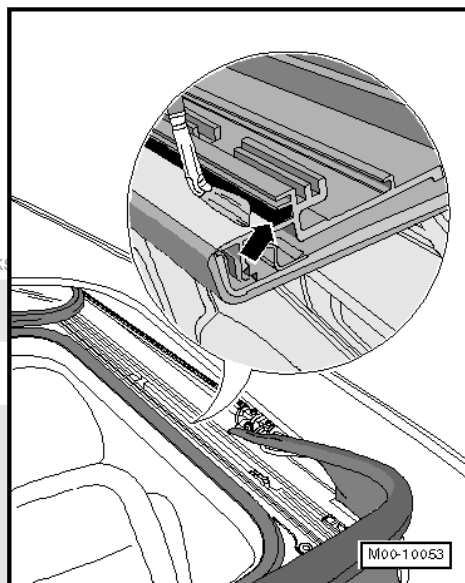
Clean and coat the guide rail



- Open the glass sunroof panel entirely.
- Remove the grease and dirt residue on the guide rail with a lint-free cloth. (If necessary, remove sand and fine pollen from the guide rails with a shop vacuum).
- Apply Lubricating Grease -G 060 751 A2- grease on the inside of the guide rail -arrow- with a commercially available paint brush.
- Apply Lubricating Grease -G 060 751 A2- on the outside of the guide rail -arrow- with a commercially available paint brush.



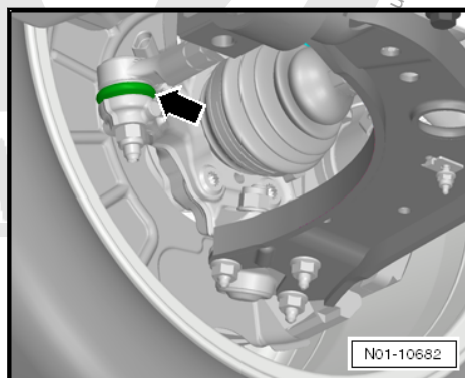
- Apply Lubricating Grease -G 060 751 A2- on the side of the guide rails for the sliding headliner -arrow- with a commercially available paint brush.



- Remove the excess lubricant from the guide rails with a lint-free cloth.
- Repeat the process for the opening on the opposite side of the vehicle.

4.55 Tie Rod Ends Checking Play, Attachment and Ball Joint Boots

Perform the following procedure:



- With the vehicle raised (wheels off ground), check the play by moving the tie rods and wheels. Play: no play
- Check the attachment.
- Check the tie rod ball joint boots -arrow- for damage and proper seating.



4.56 Parking Heater, Setting Week Day in Instrument Cluster Menu

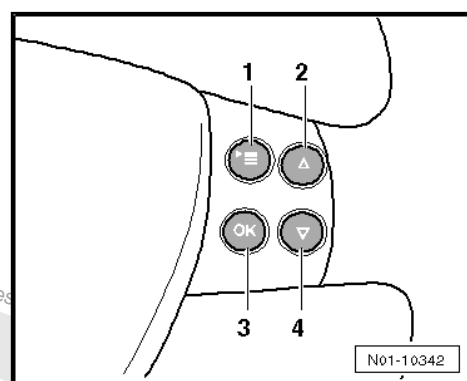
⇒ H4.56.1 eater, Setting Week Day in Instrument Cluster Menu, Jetta from My 2005, Golf Wagon from MY 2007", page 281

⇒ H4.56.2 eater, Setting Week Day in Instrument Cluster Menu, Golf Wagon from MY 2010, Jetta from MY 2011", page 282

4.56.1 Parking Heater, Setting Week Day in Instrument Cluster Menu, Jetta from My 2005, Golf Wagon from MY 2007

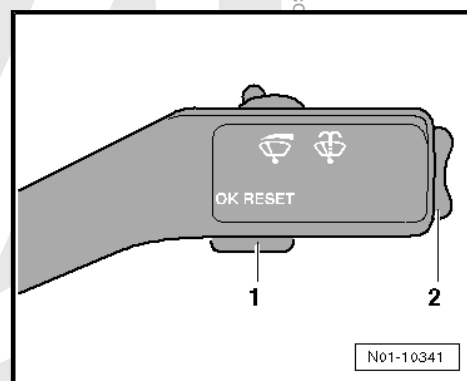
Because the weekday in the parking heater menu has nothing to do with setting the time and date in the instrument cluster, it must set separately.

Weekday, Setting using Multifunction Steering Wheel Buttons:



- Press the button -1- until the parking heater menu appears.
- Press the button -4- until the “day of the week” is displayed and then press the button -3- to select it.
- Now set the weekday using the buttons -4- and -2- and confirm with button -3-.
- Exit the menu with the button -1-.

Weekday, Setting using Windshield Wiper Lever Buttons:



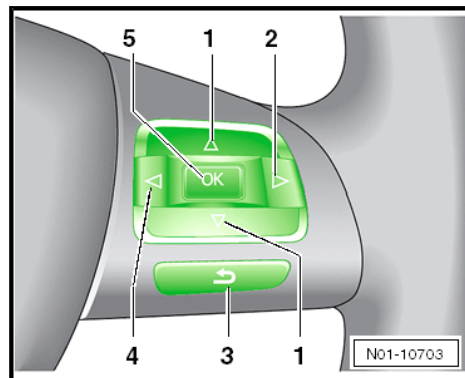
- The path in the menu is the same as setting with the buttons in the multifunction steering wheel.



4.56.2 Parking Heater, Setting Week Day in Instrument Cluster Menu, Golf Wagon from MY 2010, Jetta from MY 2011

Because the weekday in the parking heater menu has nothing to do with setting the time and date in the instrument cluster, it must set separately.

Weekday, Setting with Buttons in Multifunction Steering Wheel



Use the button -5- to confirm the menu items.

Use the arrow buttons -1- -2- and -4- to switch from one menu to another.

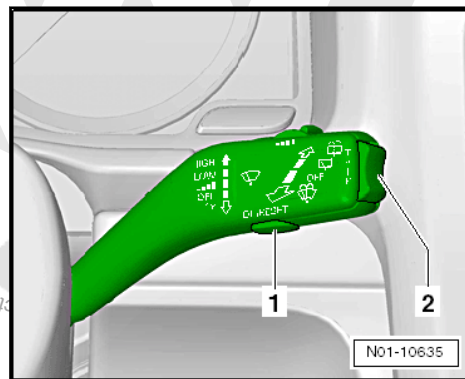
1. Selecting the main menu:

- Switch the ignition on. An outline of a vehicle appears.
- Push the “OK”-5- button in the multifunction steering wheel
- Press the corresponding arrow buttons -2- and -4- on the multifunction steering wheel until the “Parking Heater” menu appears.
- Push the “OK”-5- button in the multifunction steering wheel

2. Selecting the day of the week:

- Press the arrow buttons -1- until the “setting start time” menu appears.
- Select the “day of the week”.

Setting the weekday using the buttons on the windshield wiper lever:

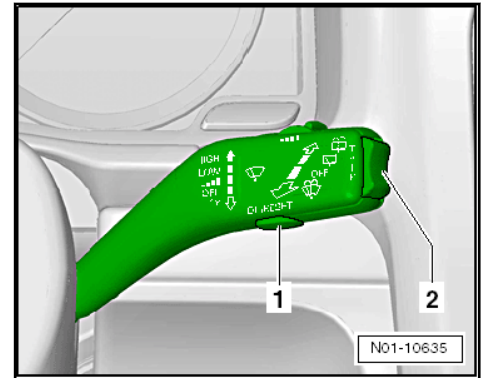


Use the button -1- to confirm the menu items.

Use the rocker switch -2- to switch from one menu to another.

1. Selecting the main menu:

- Switch the ignition on. An outline of a vehicle appears.



- Push the button -1- once.
- Hold the rocker switch -2- down for approximately one second to switch from one menu back into the main menu. Or select “back” in the menu and press the button -1-.
- Push the rocker switch -2- upward or downward to highlight a point on the menu.

The marked menu item is located between the two horizontal lines. There is also a small triangle on the right side.

- Mark the menu item “Parking heater” and push the button -1- in the windshield wiper lever to confirm.

2. Select the day of the week.

- Push the rocker switch -2- upward or downward to highlight the menu item “setting start time”.
- Select the “day of the week” and confirm with the button -1-.

4.57 Dust and Pollen Filter, Cleaning Housing and Replacing Filter

Procedure

Heating, Ventilation and Air Conditioning. Refer to ➔ Rep. Gr. 80 ➔ Heater, Servicing ➔ Dust and Pollen Filter, Removing and Installing.



Note

For technical reasons it is possible the links do not go to the correct chapter. If that is the case, please look up the procedure manually in the corresponding infomedia.



4.58 Battery Transport Mode, Deactivating



Note

- ◆ *The battery transport mode ensures that the vehicle will start.*
- ◆ *The battery transport mode reduces the discharge of the battery by switching off any electrical equipment.*
- ◆ *All vehicle functions that are not necessary while the vehicle is being transported or that require any power from the battery are switched off when battery transport mode is activated to conserve the battery charge.*
- ◆ *This applies especially to all vehicle functions that could be left on and drain the battery capacity.*
- ◆ *Examples would be the radio or electronically-controlled doors and attachments, as well as the anti-theft alarm system which could be set off inadvertently during transport.*

Procedure:



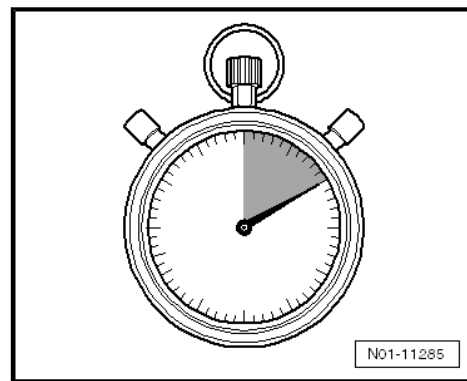
Note

If the displays indicated in the procedure are not shown on the display, refer to the ➔ Vehicle Diagnostic Tester Operating Instructions.

VAS PC
- Connect the Vehicle Diagnostic Tester. Refer to ➔ D3.5 iagnostic Tester, Connecting , page 57 .
- Switch the ignition on.
- Select "Guided Fault Finding" on the touch screen.
- Perform the vehicle identification.
- Select
- Select the field "Go to" on the screen.
- Select "Function/component selection".
- Select "Body".
- Select "Electrical Equipment".
- Select "Systems capable of On Board Diagnostic (OBD)".
- Select "Data bus diagnostic interface".
- Select "Data bus diagnostic interface, functions".
- Select "switch on/switch off transport mode".
- Follow the "Guided Fault Finding" instructions.

Procedure for fault stored in the DTC memory "Vehicle Transport Mode Active P169A00"

- Switch the transport mode on again.
- Turn off the ignition for ten seconds.



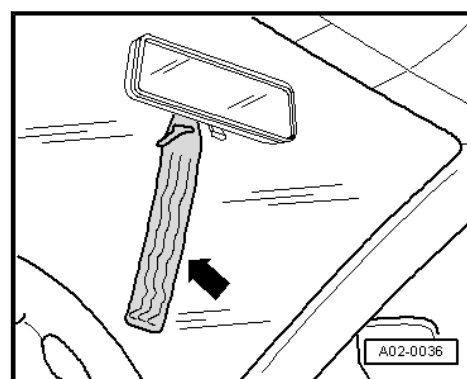
- Switch transport mode off again.
- Turn off the ignition again for ten seconds.

The fault stored in the DTC memory “Vehicle transport mode active P169A00” is no longer equipped after performing this procedure.

Keep the Vehicle Diagnostic Tester connected because it may be needed later to perform other checks or tests.

4.59 Transportation Safeguards, Removing Transportation Blocks from Front Axle Struts

For vehicles with Sport suspension, transportation blocks are installed in the front axle struts. These models can be identified by a tag attached at the mirror “arrow”.



Note

Locking pieces should prevent vehicle from bouncing when being driven on to an automobile transport or railroad car and thereby become damaged.



WARNING

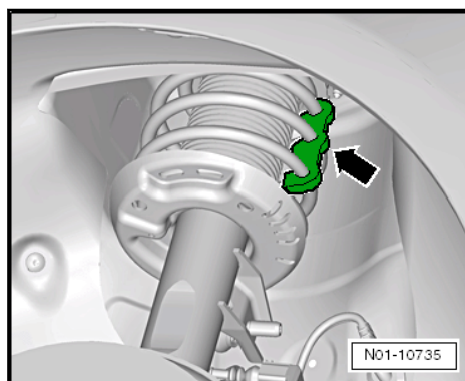
The transportation blocks must always be removed before delivering the vehicle! There is a “Warning!” hang tag hanging from the rearview mirror as a reminder.

Perform the following procedure:



Note

- ◆ *It is not necessary to remove the wheels.*
- ◆ *Be careful not to damage the surface of the coil springs.*
- Relieve load on coil spring by raising vehicle on lifting platform.
- Press transportation block -arrow- from coil spring.



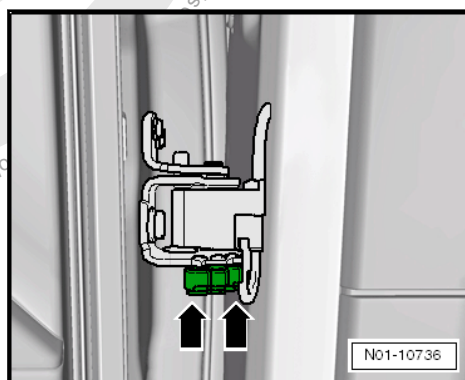
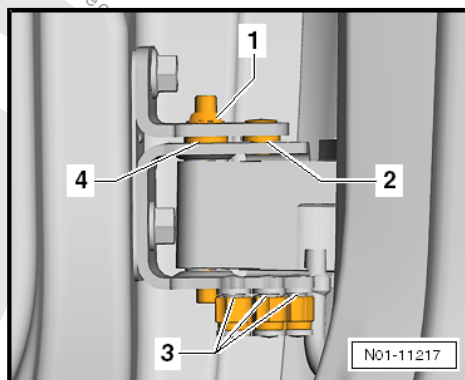
4.60 Door Arrester, Lubricating

Perform the following procedure:

- Lubricate the door arrester with Universal Oil Spray -G 000 115 A2- at the following locations: -1-, -2-, -3-, -4-.

Move the door back and forth several times so that the universal oil coats the entire door arrester.

- Wipe off any excess universal oil with a cloth.

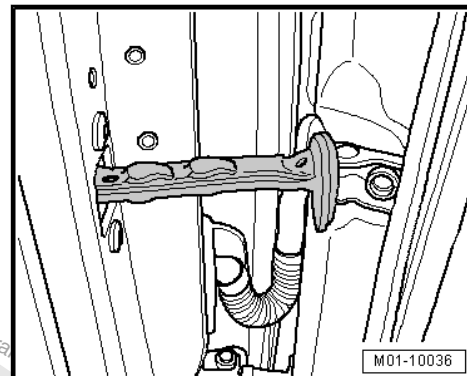




- Coat the door arrester with Paste -G 000 150- where indicated with the -arrow-.

Simple door arrester

- Remove the grease and dirt residue on the door arrester with a lint-free cloth.



- Apply Grease -G 060 751 A2- on the upper and lower sections of the door arrester.

4.61 Clock and Date, Adjusting

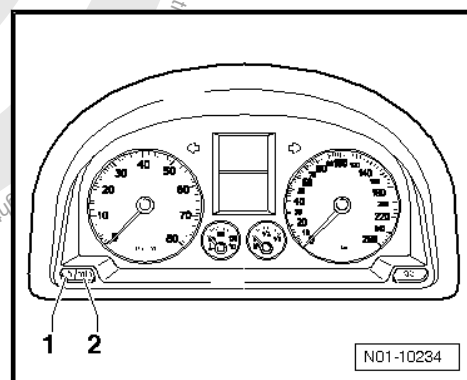
⇒ [a4.61.1 nd Date, Adjusting, Jetta from My 2005, Golf Wagon from MY 2007", page 287](#)

⇒ [a4.61.2 nd Date, Adjusting, Golf Wagon from MY 2010, Jetta from MY 2011", page 289](#)

4.61.1 Clock and Date, Adjusting, Jetta from My 2005, Golf Wagon from MY 2007

Set the clock using the buttons below the tachometer:

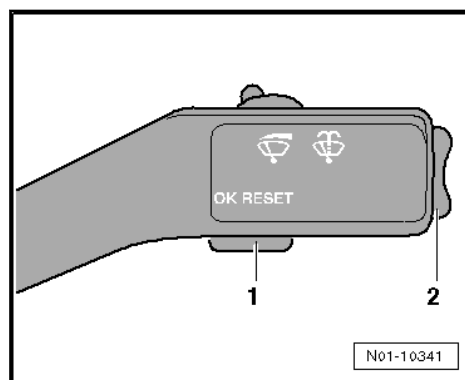
Adjustment buttons are located on the left under the tachometer.



- Press the left button -1- to adjust the hours. Press the button only quickly to advance the hours.
- Press the right button -2- to adjust the minutes. Press the button only quickly to advance the minutes.

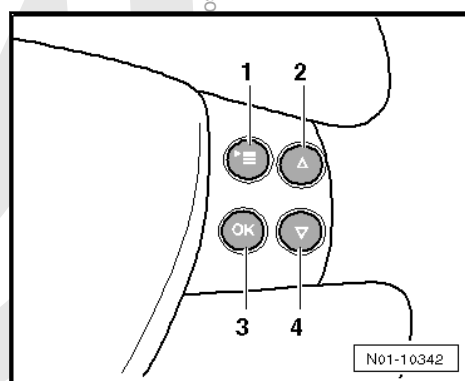


Hour and Date, Setting with Windshield Wiper Lever Buttons;



- Switch the ignition on.
- Press the button -2- for two seconds to go to the main menu.
- Select the “settings” menu with the button -2- and confirm with the button -1-.
- Select the “Clock” menu with button -2- and confirm with button -1-.
- Mark the menu time “Hours” by pressing the button -1- Adjust the correct hour with the -2- button and confirm with the -1- button.
- Do the same with menu item “Minutes”.
- To leave the “Settings” menu use the menu item “back”.
- Select “MFI” (multifunction indicator) and press the button -1- to confirm.
- Switch off the ignition.

Hour and Date, Setting with Multifunction Steering Wheel Buttons:



- Switch the ignition on.
- Press the button -1- until the “settings” menu appears.
- Then select the menu item “Clock” with buttons -2- and -4-.
- Confirm the selection with the button -3-.
- When the “hours” are marked, the marked menu item is located between both horizontal lines. Confirm with the button -3- and use the buttons -2- and -4- to set the correct hour.
- Confirm with the button -3- and change to minute setting which is done the same as when setting the hour.
- The menu can be left again with button -1-.

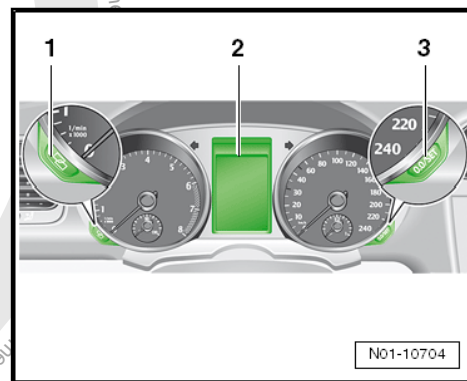


- Switch off the ignition.

4.61.2 Clock and Date, Adjusting, Golf Wagon from MY 2010, Jetta from MY 2011

Clock with Buttons in Instrument Cluster

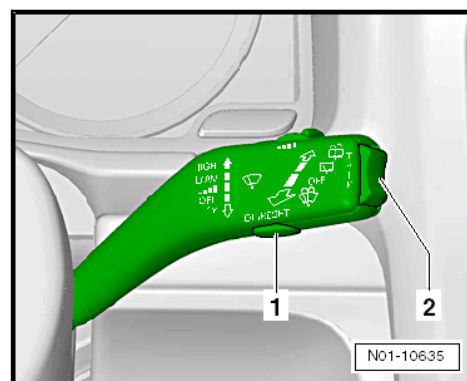
The clock can be set, only when the clock time is being displayed in the instrument cluster.



Use the buttons -1- and -2- inside the instrument cluster to set the clock.

- Press the button -1- to select the hour setting in the instrument cluster display.
- Press the button -3- quickly to advance the hours. Hold the button down to quickly scroll through hours.
- Press the button -1- again to select the minutes display.
- Press the button -3- quickly to advance the minutes.
- Hold button down to quickly scroll through minutes.
- Press the button -1- again to end the time adjustment.

Hour and Date, Setting with Windshield Wiper Lever Buttons:

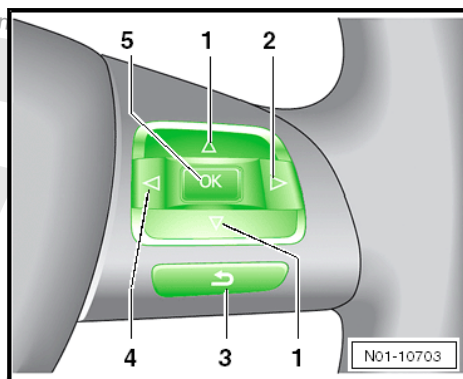


- Switch the ignition on.
- Press the button -2- for two seconds to go to the main menu.
- Use the button -2- to select the “settings” menu. Confirm with the button -1-.
- Select the “Clock” menu with button -2- and confirm with button -1-.
- Now mark the menu item “Hours” by pressing button -1-, set correct hour with button -2- and then confirm with button -1-.
- Do the same with menu item “Minutes”.



- To leave the "Settings" menu use the menu item "back".
- Select "MFI" (multifunction indicator) and press the button -1- to confirm.
- Switch off the ignition.

Hour and Date, Setting with Multifunction Steering Wheel Buttons:



- Switch the ignition on.
- Press the button -5- until the "settings" menu appears.
- Then select menu item "Clock" with buttons -2- and -4-.
- Confirm with button -5-.
- Confirm the "hour" with the button -5- and use the buttons -2- and -4- to set the correct hour.
- Confirm with the button -5- and change to minute setting which is done the same as when setting the hour.
- To leave the menu again use the button -1-.
- Switch off the ignition.

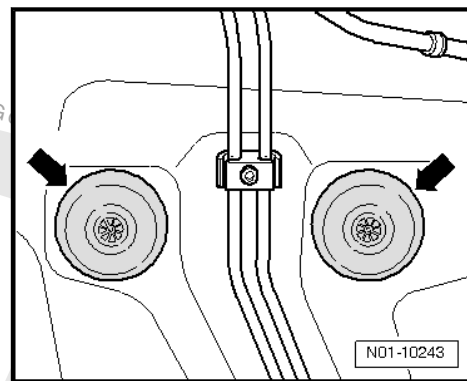
4.62 Underbody, Visually Inspecting Underbody Protection, Underbody Trim Panels, Wire Routing and Plugs for Damage



Caution

- *When visually inspecting, pay attention to the underbody, wheel housings and side sills!*
- ◆ *Make sure all the lines are secure in their mountings, all plugs are present and there is no damage to the underbody.*
- ◆ *Correct any malfunctions (repair procedure). This can help prevent corrosion and rust.*

Pay special attention to any cracks, detachments and corrosion of the underbody protection when inspecting the caps -arrows-.



4.63 Toothed Belt and Toothed Belt Tensioning Roller, Replacing (TDI Engines)



Note

Generally, it is not necessary to replace the belt before reaching the next replacement interval. In particular, cracks on the back side of the belt do not affect service life and cannot be claimed as goodwill or warranty measures.

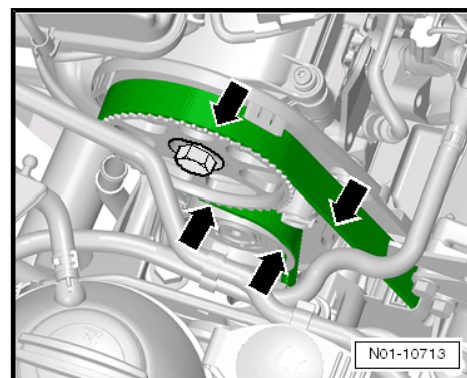
- Toothed belt, removing and installing. Refer to ⇒ Engine Mechanical, Fuel Injection, and Ignition; Rep. Gr. 15; Cylinder Head, Valvetrain / Toothed Belt, Removing and Installing.

4.64 Camshaft Drive Toothed Belt, Checking (TDI Engines)

⇒ [B4.64.1 elt Condition, Checking", page 291](#)

4.64.1 Toothed Belt Condition, Checking

- Remove the upper toothed belt guard. Refer to ⇒ Engine Mechanical, Fuel Injection and Glow Plug; Rep. Gr. 15; Cylinder Head, Removing and Installing.
- Turn the crankshaft completely at least one time and check the condition of the toothed belt at the following points:



- ◆ Cranks, cross-sectional breaks, tears (on side of cover) -arrow-
- ◆ Lateral movement
- ◆ Fraying of cords
- ◆ Tears (in tooth base) -arrow-



- ◆ Separation (toothed belt body, belt cords)
- ◆ Surface cracks (plastic shroud)
- ◆ Oil or grease contamination



Note

It is essential to replace toothed belt if malfunctions are found. This will prevent any belt malfunctions. Replacing the toothed belt is a repair procedure.

4.65 Camshaft Drive Toothed Belt, Replacing, 2.0L FSI and TFSI Engine



Note

Generally, it is not necessary to replace the belt before reaching the next replacement interval. In particular, cracks on the back side of the belt do not affect service life and cannot be claimed as goodwill or warranty measures.

- Toothed belt, removing and installing. Refer to ⇒ Engine Mechanical, Fuel Injection, and Ignition; Rep. Gr. 15; Cylinder Head, Valvetrain / Toothed Belt, Removing and Installing.

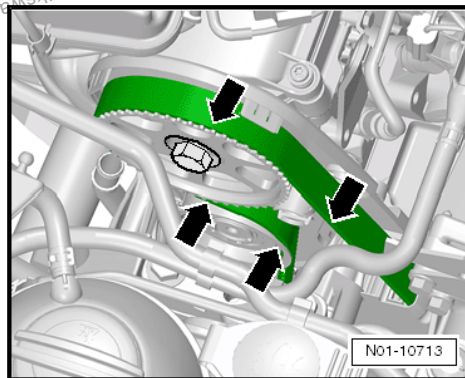
4.66 Camshaft Drive Toothed Belt, Checking, 4-Cylinder Gasoline Engines without Replacement Interval

⇒ [B4.66.1 Belt Condition, Checking", page 292](#)

⇒ [B4.66.2 Belt Condition, Checking, 1.4L TSI Hybrid Engines", page 293](#)

4.66.1 Toothed Belt Condition, Checking

- Remove the upper toothed belt guard. Refer to ⇒ Engine Mechanical, Fuel Injection and Ignition; Rep. Gr. 15; Cylinder Head, Removing and Installing.
- Turn the crankshaft completely at least one time and check the condition of the toothed belt at the following points:



- ◆ Cracks, cross-sectional breaks, tears (on side of cover) -arrow-
- ◆ Lateral movement
- ◆ Fraying of cords



- ◆ Tears (in tooth base) -arrow-
- ◆ Separation (toothed belt body, belt cords)
- ◆ Surface cracks (plastic shroud)
- ◆ Oil or grease contamination



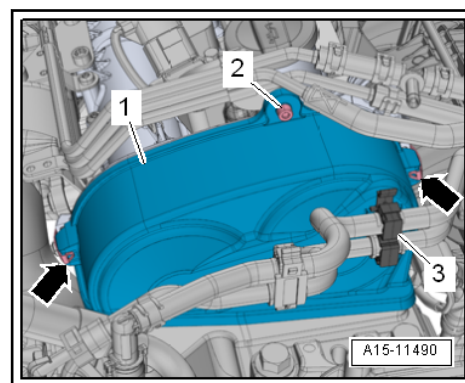
Note

It is essential to replace toothed belt if malfunctions are found. This will prevent any belt malfunctions. Replacing the toothed belt is a repair procedure.

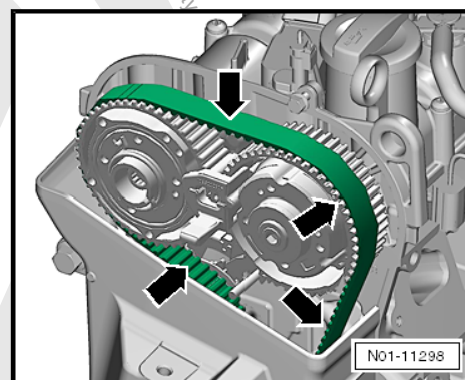
4.66.2 Toothed Belt Condition, Checking, 1.4L TSI Hybrid Engines

Procedure

- Free up the hoses from the bracket -3-.



- Remove the bolt -2-.
- Loosen the clamps -arrows-, and remove the upper toothed belt guard -1-.
- Turn the crankshaft at the crankshaft belt pulley bolt in the direction of engine rotation and then check the entire toothed belt for the following conditions:



- ◆ Cranks, cross-sectional breaks, tears (on side of cover) -arrow-
- ◆ Lateral movement
- ◆ Fraying of cords
- ◆ Tears (in tooth base) -arrow-
- ◆ Separation (toothed belt body, belt cords)



- ◆ Surface cracks (plastic shroud)
- ◆ Oil or grease contamination



Note

It is essential to replace toothed belt if malfunctions are found. This will prevent any belt malfunctions. Replacing the toothed belt is a repair procedure.

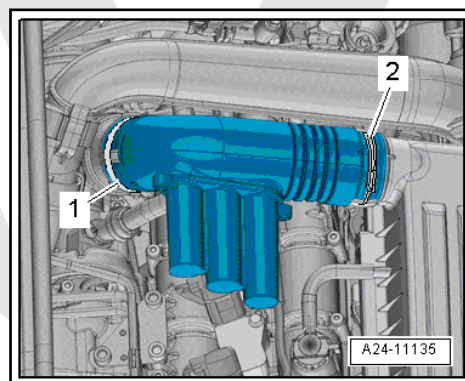
Assembly is done in the reverse order.

Tightening Specification	Nm
Bolt for the toothed belt guard	8

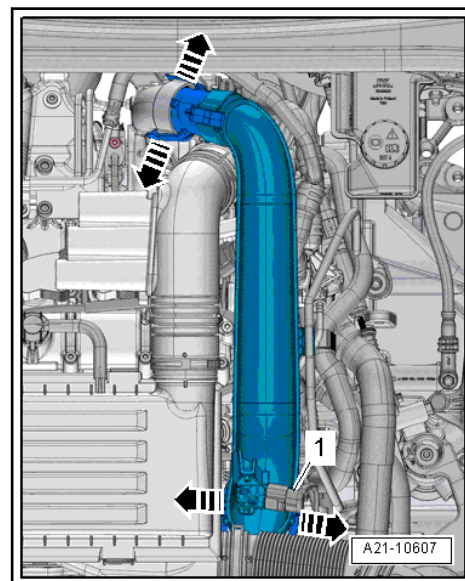
4.67 Coolant Pump Toothed Belt, Checking

Procedure

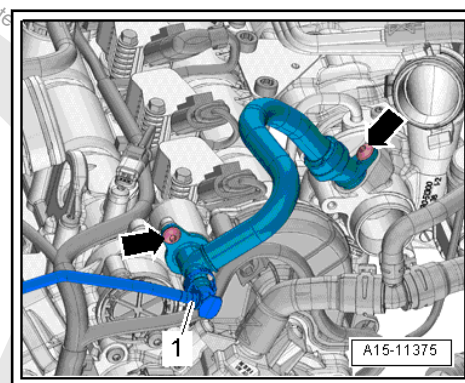
- Engine Cover, Removing and Installing, 1.4L TSI Hybrid Engine. Refer to ➤ [C4.33.4 over, Removing and Installing, 1.4L TSI Hybrid Engine](#), page 173 .
- Loosen the hose clamps -1- and -2- and remove the air duct pipe.



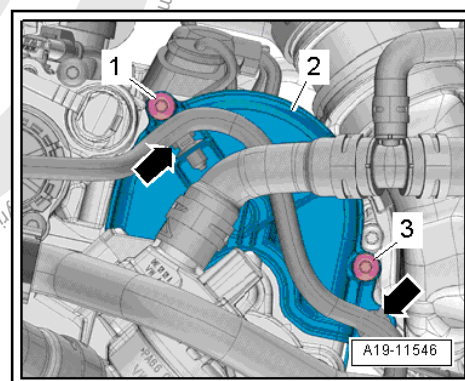
- Free up air guide hoses from the air duct pipe.
- Disconnect the connector -1-.



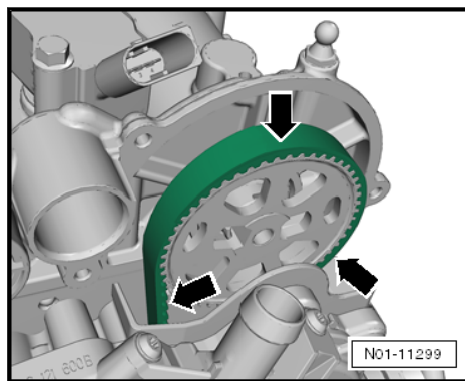
- Release the catches in the direction of the arrow and remove the air duct pipe.
- Release the hose -1- to the EVAP canister and remove.



- Remove the bolts -arrows- and remove the crankcase ventilation hose.
- Free up the wiring harness -arrows-.



- Remove the bolts -1- and -3- and remove the toothed belt guard -2- for the coolant pump toothed belt.
- Turn the crankshaft at the ribbed belt pulley bolt in the direction of engine rotation and then check the entire toothed belt for the following conditions:



- ◆ Cranks, cross-sectional breaks, tears (on side of cover) -arrow-
- ◆ Lateral movement
- ◆ Fraying of cords
- ◆ Tears (in tooth base) -arrow-
- ◆ Separation (toothed belt body, belt cords)
- ◆ Surface cracks (plastic shroud)
- ◆ Oil or grease contamination



Note

It is essential to replace toothed belt if malfunctions are found. This will prevent any belt malfunctions. Replacing the toothed belt is a repair procedure.

Assembly is done in the reverse order.

Tightening Specification	Nm
Bolt for the toothed belt guard	8
Bolt for the crankcase ventilation	9

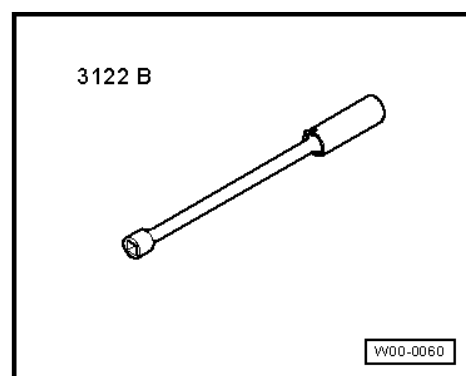


4.68 Spark Plugs, Replacing

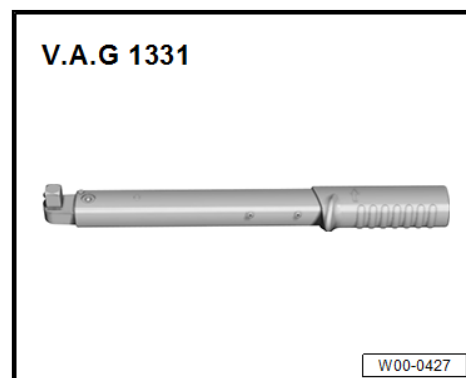
- ⇒ [P4.68.1 lugs, Replacing, 1.2L TSI Engines", page 299](#)
- ⇒ [P4.68.2 lugs, Replacing, 1.4L SRE Gasoline Engine", page 300](#)
- ⇒ [P4.68.3 lugs, Replacing, 1.4L TSI Engine \(103 kW, 118 kW, 125 kW\)", page 302](#)
- ⇒ [P4.68.4 lugs, Replacing, 1.4L TSI Engine \(90 kW\)", page 306](#)
- ⇒ [P4.68.5 lugs, Replacing, 1.4L TSI Hybrid Engine", page 311](#)
- ⇒ [P4.68.6 lugs, Replacing, 1.6L SRE Gasoline Engine", page 314](#)
- ⇒ [P4.68.7 lugs, Replacing, 1.6L FSI Engine", page 316](#)
- ⇒ [P4.68.8 lugs, Replacing, 2.0L FSI/2.0L TSI Engines", page 318](#)
- ⇒ [P4.68.9 lugs, Replacing, 2.0L TFSI Engines", page 321](#)
- ⇒ [P4.68.10 lugs, Replacing, 2.0L SRE Gasoline", page 325](#)
- ⇒ [P4.68.11 lugs, Replacing, 2.5L SRE Gasoline", page 326](#)
- ⇒ [P4.68.12 lugs, Replacing, 1.8L \(125kW\) and 2.0L \(155 kW\) TSI Engine", page 329](#)

Special tools and workshop equipment required

- ◆ Spark Plug Removal Tool -3122 B-

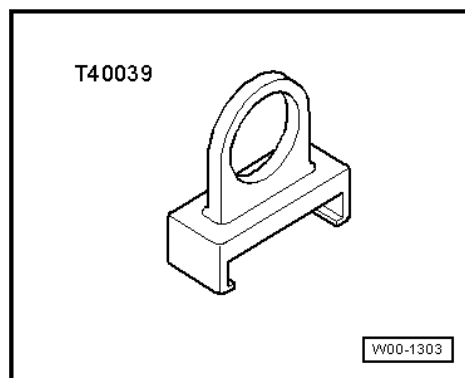


- ◆ Torque Wrench 1331 5-50Nm -V.A.G 1331-

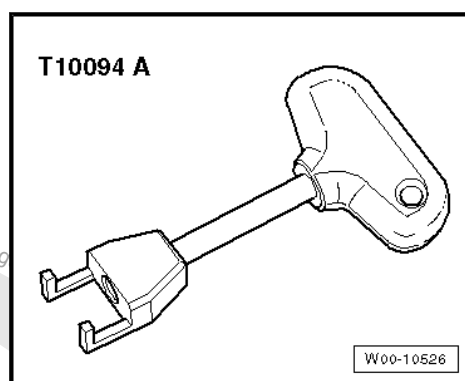




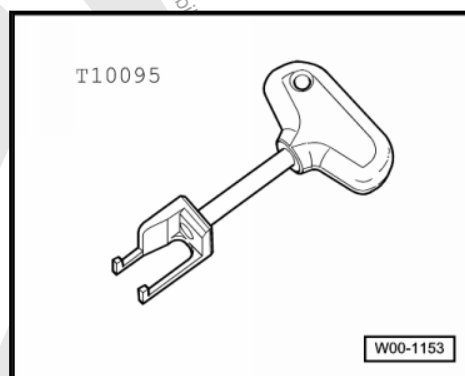
◆ Puller - Ignition Coil -T40039-



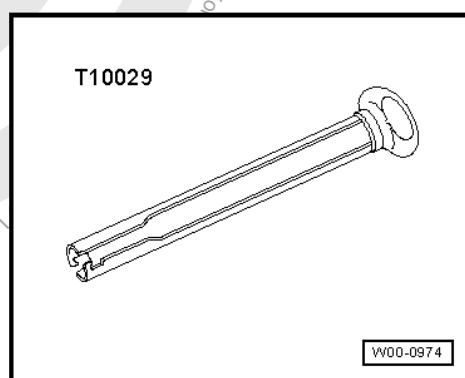
◆ Puller - Ignition Coil -T10094A-



◆ Puller - Ignition Coil -T10095A-

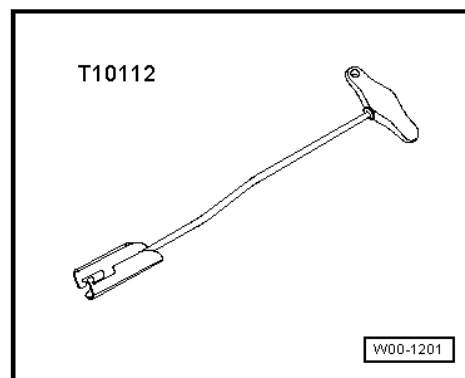


◆ Spark Plug Wire Tool -T10029-

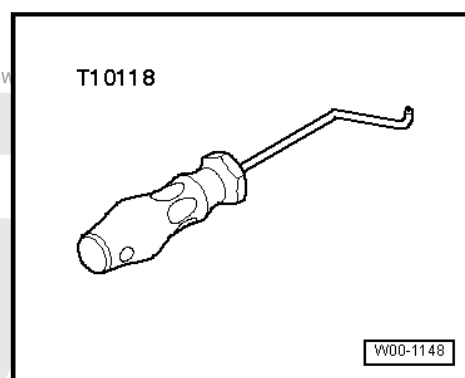




◆ Puller - Spark Plug Connector -T10112-



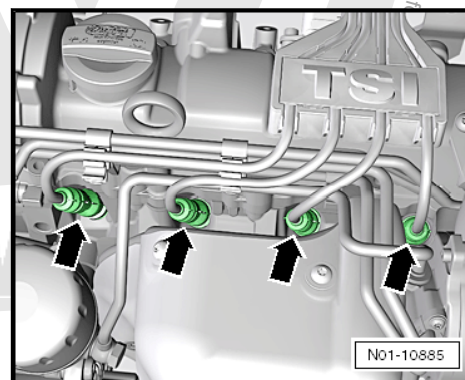
◆ Elbow Assembly Tool -T10118-



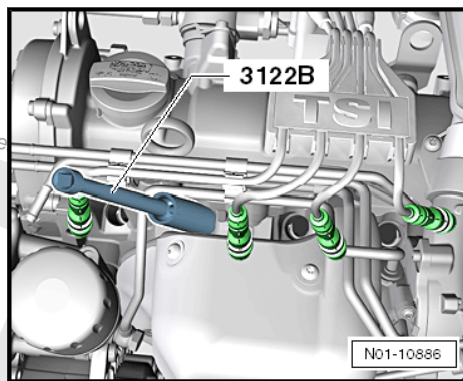
4.68.1 Spark Plugs, Replacing, 1.2L TSI Engines

Removing

The spark plugs are located under the spark plug connectors -arrows-.



- Loosen the spark plug connectors with Puller - Spark Plug Connector - T10112A-.
- Remove the spark plugs using the Spark Plug Removal Tool -3122 B-.



Note

Please follow all waste disposal regulations!

Installing

- Install the new spark plugs using the Spark Plug Removal Tool -VAS 3122B- and tighten to the specification. Refer to [⇒ page 300](#).
- Attach the spark plug connectors onto the spark plugs by hand. The spark plug connectors must engage.

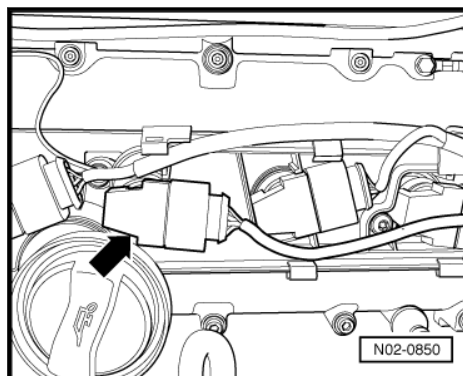
Tightening Specification	Nm
Spark plugs in cylinder head	25

4.68.2 Spark Plugs, Replacing, 1.4L SRE Gasoline Engine

- Remove the engine cover. Refer to [⇒ C4.33 over Top, Removing and Installing](#), page 170.

Removing

Spark plugs are located under ignition coils with power output stages -arrow-.

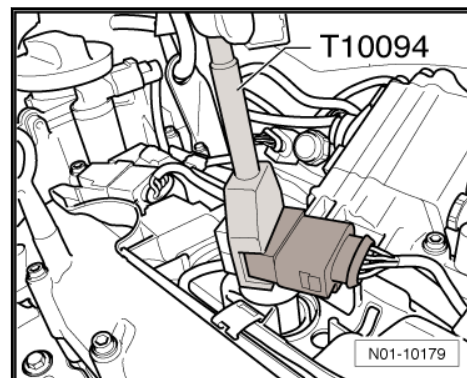


Note

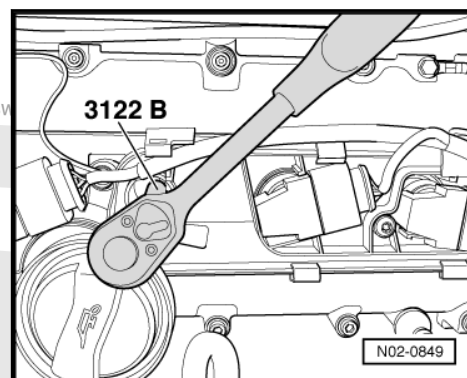
Note the installation position of ignition coils with power output stages!



- Remove ignition coils with power output stages from spark plugs using Puller - Ignition Coil -T10094A-.



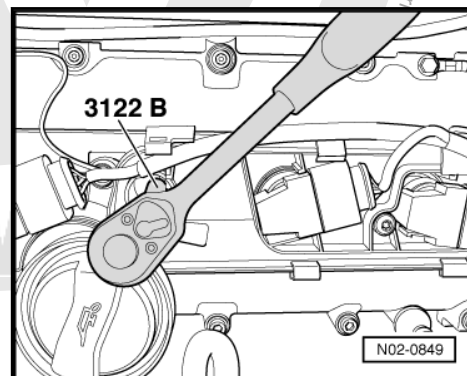
- Push connector in direction of ignition coils with power output stages, press catch down by hand and disconnect connector.
- Remove the spark plugs using the Spark Plug Removal Tool -3122 B-.



Note

- ◆ *Spark plug identification and tightening specification. Refer to »Engine« ⇒ Rep. Gr. 28 »Ignition, Servicing/Test Data«.*
- ◆ *Please follow all waste disposal regulations!*

Installing

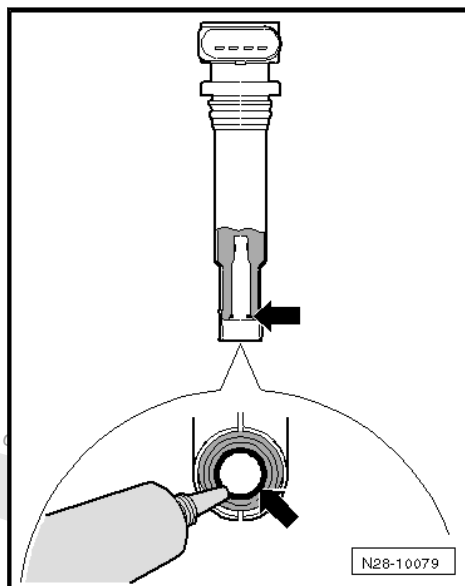


- Install the new spark plugs using the Spark Plug Removal Tool -3122 B-.



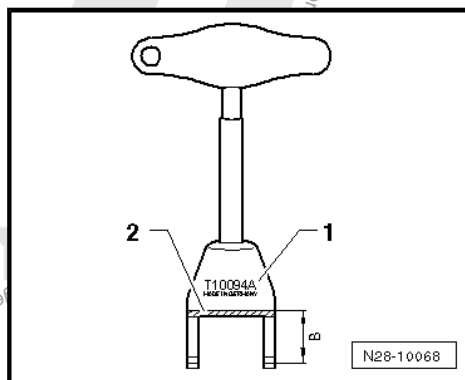
Note

- ◆ When installing new spark plugs, the ignition coils with power output stages must be lubricated with Silicone Paste. Refer to the ➔ Electronic Parts Catalog (ETKA).
- ◆ The correct silicone paste is shown on the Electronic Parts Catalog (ETKA) with the ignition coils and/or the spark plugs.
- Apply a thin bead of Silicone Grease all around the sealing hose on the ignition coil with power output stage -arrow-.



- Connect the connector to the ignition coil with power output stage. Install the ignition coil with power output stage into the cylinder head.
- Align the ignition coils with power output stages into designated recesses of cylinder head cover.
- Connect ignition coils with power output stages onto spark plugs by hand. They must be felt engage.
- Install the engine cover.

4.68.3 Spark Plugs, Replacing, 1.4L TSI Engine (103 kW, 118 kW, 125 kW)



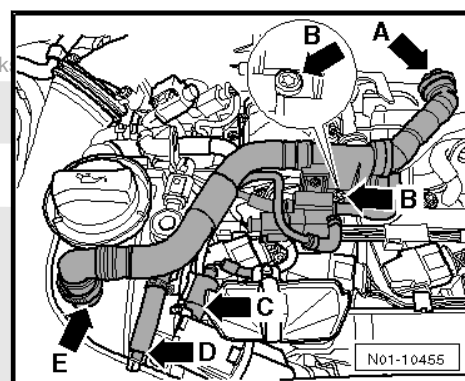


Note

The ignition coil with power output stage housing are changed. These ignition coils can only be removed and installed with the Puller - Ignition Coil -T10094A-. The old Puller - Ignition Coil -T10094- can still be used, when it is reworked as described as follows.

- Remove the marked area -2- with suitable service equipment, to reach the new specified size -B- of 18 mm.
- Mark the tool number additionally with the letter A -1-.
- Remove the engine cover. Refer to [⇒ C4.33 over Top, Removing and Installing", page 170](#) .

Removing



Note

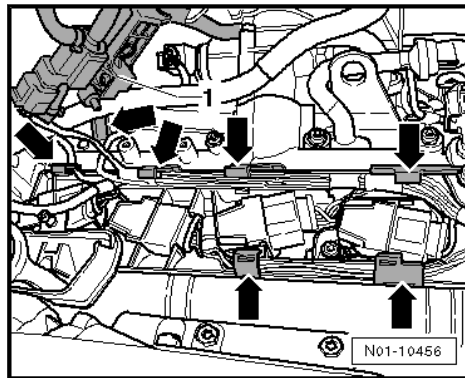
For simplified spark plug removal and installation, some components must first be loosened and set aside.



Caution

To avoid damage to connections and vacuum hose, do not use any sharp-edged tools to remove the hose.

- Remove the connector -arrow C-.
- Remove the hose ends -arrow A- and -arrow E- (to release push together).
- Remove the hose -arrow D-.
- remove the bolt -arrow B-.
- Lift the hose with the bracket and Wastegate bypass regulator valve -1- and move to the side.



- Disengage the wiring guide clips -arrows-.



Note

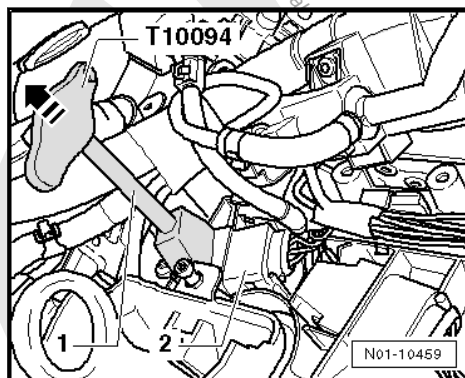
- ◆ *When removing the ignition coils with power output stages, the wiring or the connectors for the ignition coils can remain connected.*
- ◆ *Note the installation position of ignition coils with power output stages!*
- Carefully move the ignition coil with power output stage, with the wires still connected, to the side.



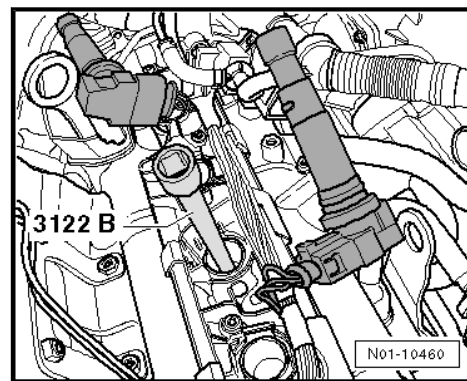
Caution

Make sure to not kink or damage the lines.

- Attach the Puller - Ignition Coil T10094A- to the ignition coil with power output stage.



- Remove ignition coil with power output stage and carefully set aside.
- Remove the spark plugs using the Spark Plug Removal Tool -VAS 3122B-.



Installing

- Screw in new spark plugs using Spark Plug Removal Tool -VAS 3122B-.



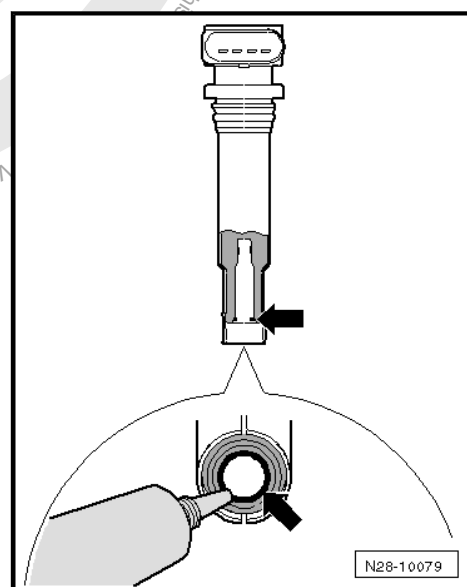
Note

- ◆ *Spark plug identification and tightening specification. Refer to ➤ Engine Mechanical; Rep. Gr. 28; Test Data, Spark Plugs.*
- ◆ *Please follow all waste disposal regulations!*



Note

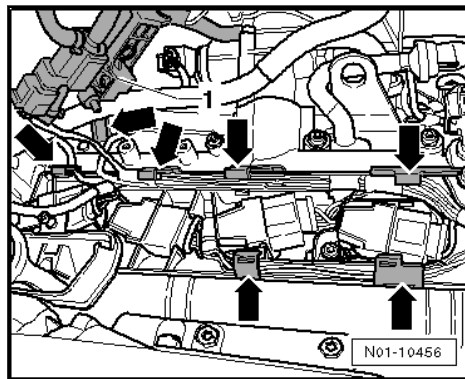
- ◆ *When installing new spark plugs, the ignition coils with power output stages must be lubricated with Silicone Paste. Refer to the ➤ Electronic Parts Catalog (ETKA).*
- ◆ *The correct silicone paste is shown on the Electronic Parts Catalog (ETKA) with the ignition coils and/or the spark plugs.*
- Apply a thin bead of Silicone Grease all around the sealing hose on the ignition coil with power output stage -arrow-.



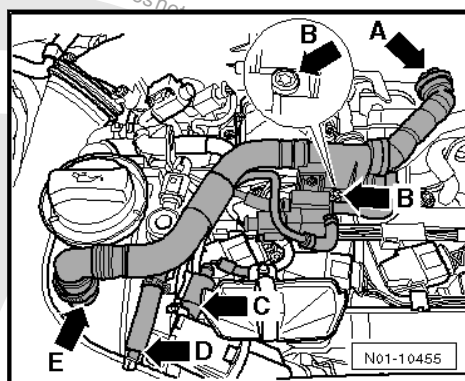
- Attach the Puller - Ignition Coil -T10094A- to the ignition coil with power output stage.



- Press ignition coils with power output stages into cylinder until they engage audibly.

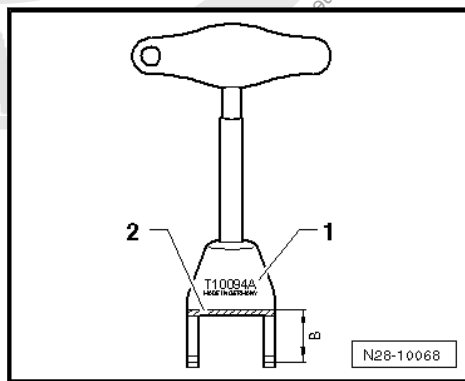


- Route the cable in the cable guide.
- Close the clips on the wiring guide -arrows-.
- Bring hose with bracket and charge air regulation solenoid valve -1- back into original position.
- Connect the connector -arrow C-.



- Connect the hose ends -arrow A- and -arrow E-.
- Connect the hose -arrow D-.
- Tighten the bolt -arrow B-.
- Install the engine cover. Refer to [⇒ C4.33 over Top, Removing and Installing”, page 170](#).

4.68.4 Spark Plugs, Replacing, 1.4L TSI Engine (90 kW)





Note

The ignition coil with power output stage housing are changed. These ignition coils can only be removed and installed with the Puller - Ignition Coil -T10094A-. The old Puller - Ignition Coil -T10094- can still be used, when it is reworked as described as follows.

- Remove the marked area -2- with suitable service equipment, to reach the new specified size -B- of 18 mm.
- Mark the tool number additionally with the letter A -1-.
- Remove the engine cover. Refer to ➤ [C4.33 over Top, Removing and Installing", page 170](#) .

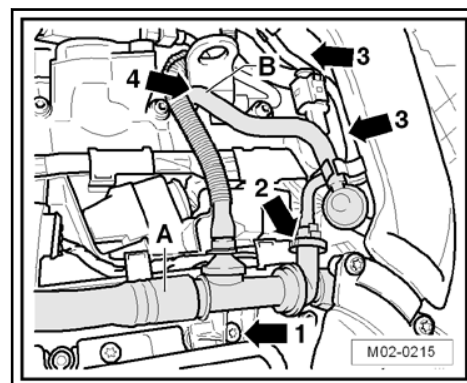
Removing



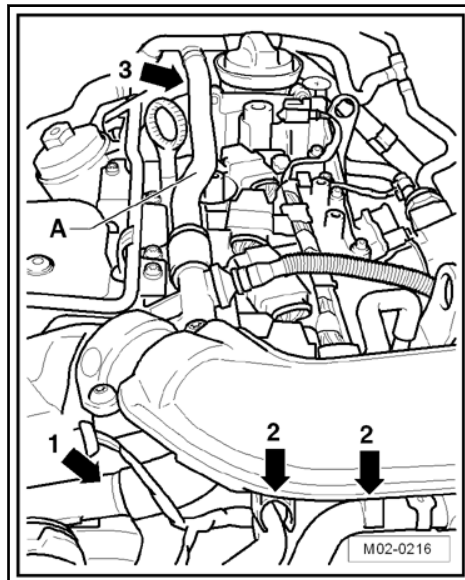
Note

For simplified spark plug removal and installation, some components must first be loosened and set aside.

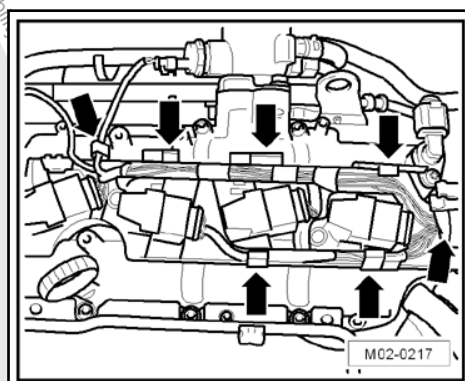
- Remove the bolt -arrow 1-.



- Remove the line -arrow 2- (to release press together).
- Remove the hoses -3 arrows- from the retainer.
- Remove the hose -B- from the supports -arrow 4-.
- Remove the hose from the supports -arrow 1-.



- Remove the hoses -2 arrows- from the retainer.
- Remove the line -A- from the connection -arrow 3-.
- Move the line -A- to the side.
- Disengage the wiring guide clips -arrows-.



Note

- ◆ When removing the ignition coils with power output stages, the wiring or the connectors for the ignition coils can remain connected.
- ◆ Note the installation position of ignition coils with power output stages!
- Carefully move the ignition coil with power output stage, with the wires still connected, to the side.



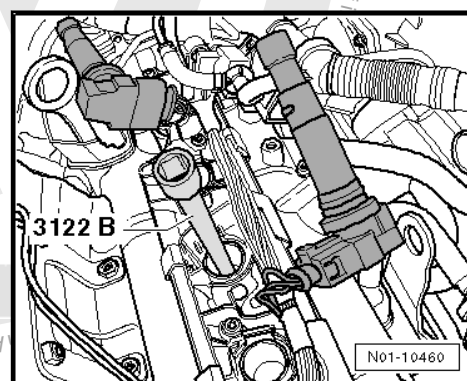
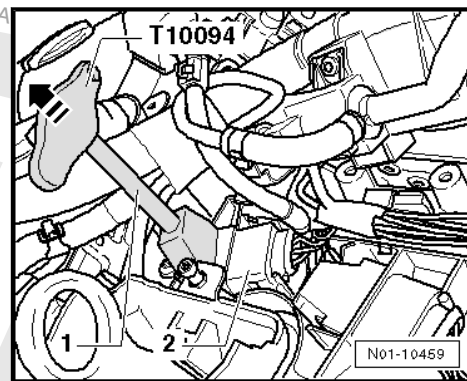
Caution

Make sure to not kink or damage the lines.

- Attach the Puller - Ignition Coil -T10094A- to the ignition coil with power output stage.



- Remove ignition coil with power output stage and carefully set aside.
- Remove the spark plugs using the Spark Plug Removal Tool -VAS 3122B-.



Installing

- Screw in new spark plugs using Spark Plug Removal Tool -VAS 3122B-.



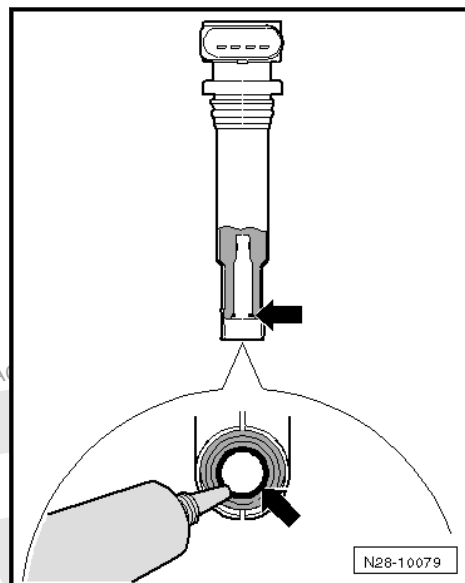
Note

- ◆ *Spark plug identification and tightening specification. Refer to ⇒ Engine Mechanical; Rep. Gr. 28; Test Data, Spark Plugs.*
- ◆ *Please follow all waste disposal regulations!*

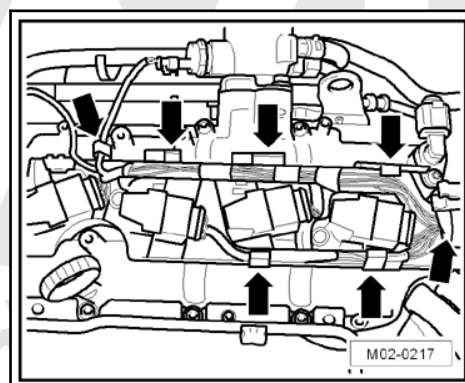


Note

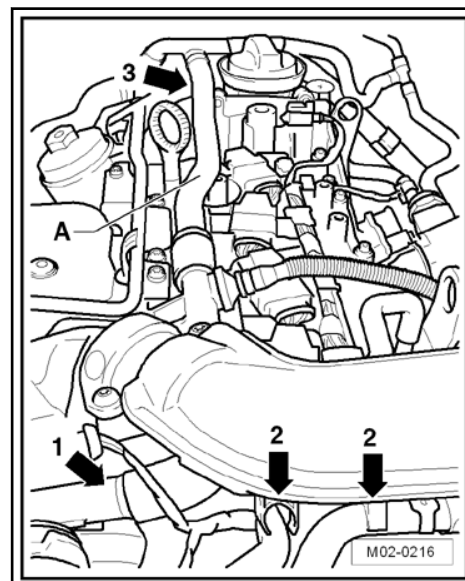
- ◆ *When installing new spark plugs, the ignition coils with power output stages must be lubricated with Silicone Paste. Refer to the ⇒ Electronic Parts Catalog (ETKA).*
- ◆ *The correct silicone paste is shown on the Electronic Parts Catalog (ETKA) with the ignition coils and/or the spark plugs.*
- Apply a thin bead of Silicone Grease all around the sealing hose on the ignition coil with power output stage -arrow-.



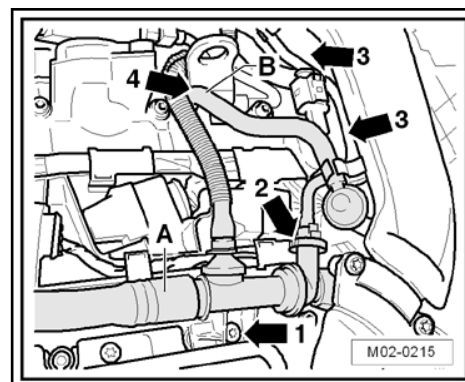
- Attach the Puller - Ignition Coil -T10094A- to the ignition coil with power output stage.
- Press ignition coils with power output stages into cylinder until they engage audibly.
- Route the cable in the cable guide.
- Close the clips on the wiring guide -arrows-.



- Connect the line -A- on the connection -arrow 3-.



- Connect the hose to the supports -arrow 1-.
- Insert the hoses -2 arrows- in the retainer.
- Install the bolt -arrow 1- and tighten it to 10 Nm.



- Connect the line -arrow 2-.
- Insert the hoses -3 arrows- in the retainers.
- Insert the hose -B- on the supports -4 arrows-.
- Install the engine cover. Refer to ➤ [C4.33 over Top, Removing and Installing](#), page 170.

4.68.5 Spark Plugs, Replacing, 1.4L TSI Hybrid Engine



WARNING

Hybrid vehicles have a high-voltage system with a very high voltage. Risk of electrocution. Visually inspect the high-voltage components in the work area before starting work. Pay attention to the general warnings. Refer to ➤ [Electrical Equipment Hybrid](#); Rep. Gr. 93; General Warning Messages for Procedures on the High-Voltage Vehicle Electrical System.



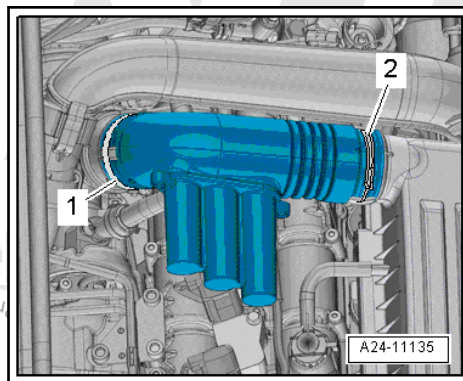
WARNING

- ◆ **All work on vehicles with a high-voltage system may only be performed by technicians that are certified as "technicians trained in electrical systems".**
- ◆ **Pay attention that the high-voltage cables are not damaged by the tools used!**
- ◆ **Contact to the responsible high-voltage technician or expert if something needs clarification.**

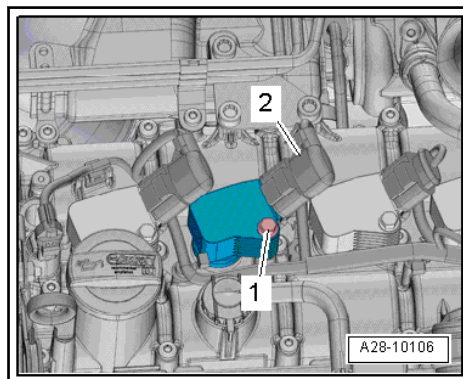
- Remove the upper engine cover. Refer to ➤ [C4.33 over Top, Removing and Installing](#), page 170 .
- Perform a visual inspection of the high-voltage components in the area where work will be performed before starting. Refer to ➤ [C4.23 omponents, Visually Inspecting for Damage of the High-Voltage Components and Wires](#), page 137 .

Removing

- Loosen the hose clamps -1- and -2- and remove the air duct pipe.



- Disconnect the connector -2-.



- Remove bolt -1-, and remove the corresponding ignition coils.

Repeat the procedure for all ignition coils.



Note

- ◆ *Note the installed position of ignition coils with power output stages.*
- ◆ *Make sure to not kink or damage the lines.*
- Remove the Spark Plugs -Q- with Spark Plug Removal Tool -VAS 3122B-.

Installing



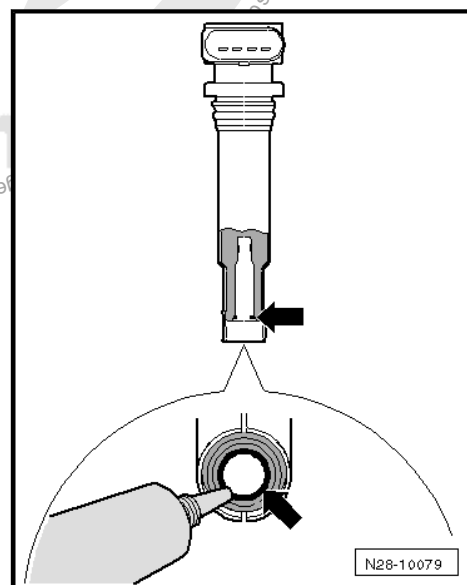
Note

- ◆ *Spark Plugs and tightening specification. Refer to Engine ➔ Rep. Gr. 28 ➔ Ignition, Servicing ➔ Test Data.*
- ◆ *Please follow all waste disposal regulations!*
- Screw in new spark plugs using Spark Plug Removal Tool -VAS 3122B-.

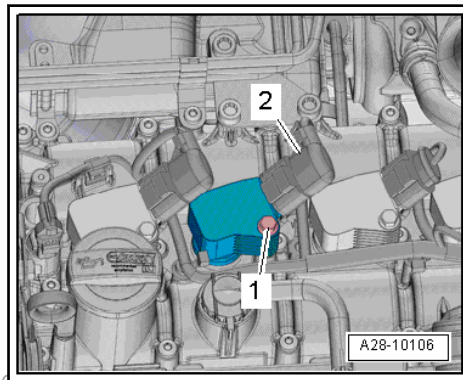


Note

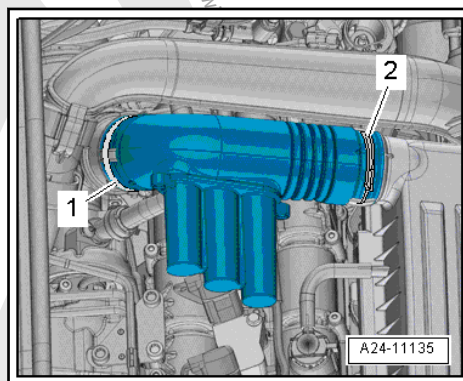
- ◆ *When installing new spark plugs, the ignition coils with power output stages must be lubricated with Silicone Paste. Refer to the ➔ Electronic Parts Catalog (ETKA).*
- ◆ *The correct silicone paste is shown on the Electronic Parts Catalog (ETKA) with the ignition coils and/or the spark plugs.*
- Apply a thin bead of Silicone Grease all around the sealing hose on the ignition coil with power output stage -arrow-.



- Align all the ignition coils one after the other and insert them loosely into the spark plug shaft.
- Press the ignition coils evenly onto the Spark Plugs -Q- by hand. Do not hit them.
- Tighten the ignition coil bolt -1- to the tightening specification.



- Connect the connector -2-.
- Repeat the procedure for all ignition coils.
- Install the air duct pipe.
 - Install the hose clamps -1- and -2-.



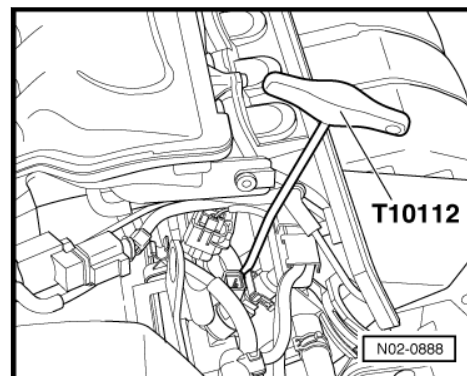
- Perform a visual inspection of the high-voltage components in the area where work will be performed after completing work. Refer to ⇒ [C4.23 components, Visually Inspecting for Damage of the High-Voltage Components and Wires](#), page 137 .
- Install the upper engine cover. Refer to ⇒ [C4.33 over Top, Removing and Installing](#), page 170 .

4.68.6 Spark Plugs, Replacing, 1.6L SRE Gasoline Engine

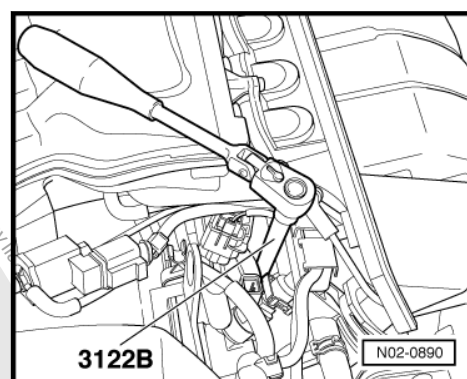
- Remove the upper engine cover. Refer to ⇒ [C4.33 over Top, Removing and Installing](#), page 170 .

Removing

- Remove the fuel injector connectors for the first and fourth cylinders.



- Remove the spark plug connectors using the Puller - Spark Plug Connector - T10112A-.



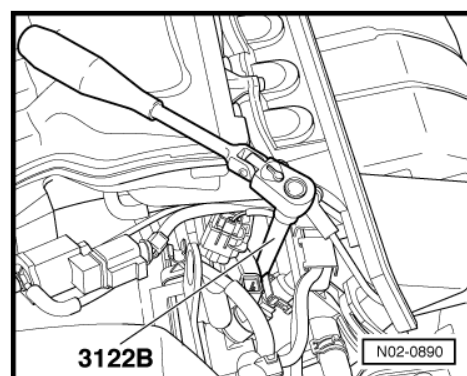
- Remove spark plugs using Spark Plug Removal Tool -3122 B-.



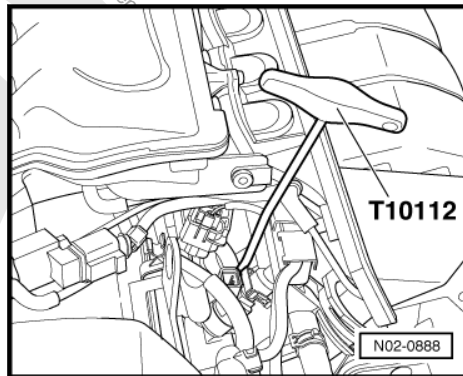
Note

- ◆ *Spark plug identification and tightening specification. Refer to ⇒ Engine Mechanical; Rep. Gr. 28; Test Data, Spark Plugs.*
- ◆ *Please follow all waste disposal regulations!*

Installing



- Install the new spark plugs using the Spark Plug Removal Tool -3122 B-.



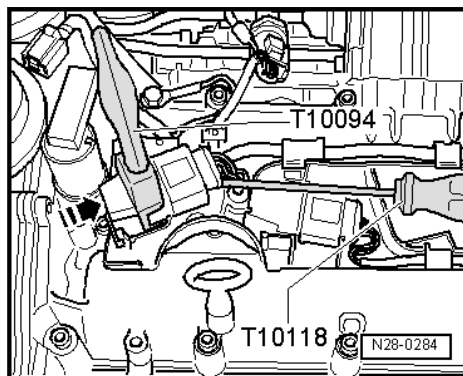
- Connect spark plug connectors using the Puller - Spark Plug Connector -T10112A-.
- Attach the fuel injector connectors.
- Check the connectors for the fuel injectors, ignition wires and spark plugs for secure seating.
- Install the engine cover again.

4.68.7 Spark Plugs, Replacing, 1.6L FSI Engine

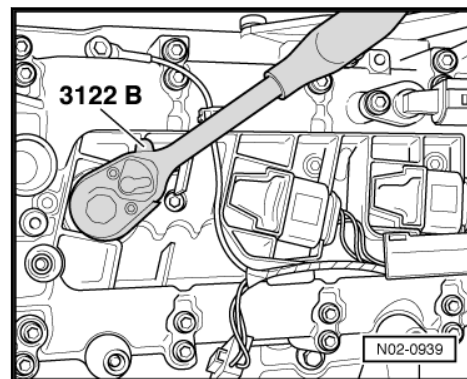
- Remove the engine cover. Refer to [C4.33 over Top, Removing and Installing](#), page 170 .

Removing

- Mount the Puller - Ignition Coil -T10094A- on the ignition coil with power output stage -arrow-.



- Pull the ignition coil with power output stage out slightly.
- Mount the Elbow Assembly Tool -T10118- as shown.
- Carefully loosen the connector safety catch and connector.
- Remove the ignition coil with power output stage.
- Remove spark plug using Spark Plug Removal Tool -3122B-.



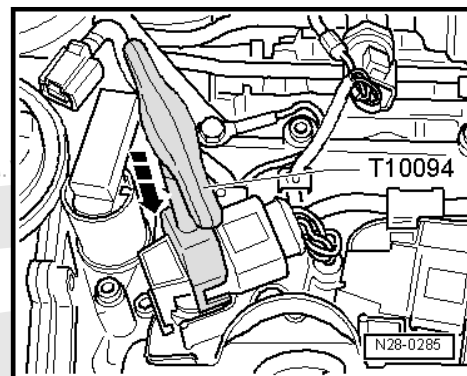
Installing

- Install the new spark plugs using the Spark Plug Removal Tool -3122 B-.



Note

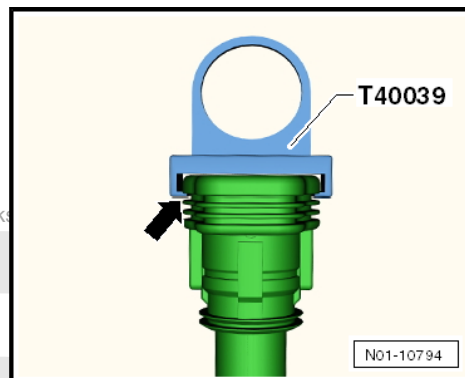
- ◆ *Spark plug identification and tightening specification. Refer to ⇒ Engine Mechanical; Rep. Gr. 28; Test Data, Spark Plugs.*
- ◆ *Please follow all waste disposal regulations!*
- Attach the Puller - Ignition Coil -T10094A- to the ignition coil with power output stage.



- Push the connector onto the ignition coil with power output stage until it audibly engages.
- Push the ignition coil with power output stage in the cylinder head -arrow-.
- Install the engine cover. Refer to ⇒ [C4.33 over Top, Removing and Installing](#), page 170 .



4.68.8 Spark Plugs, Replacing, 2.0L FSI/2.0L TSI Engines



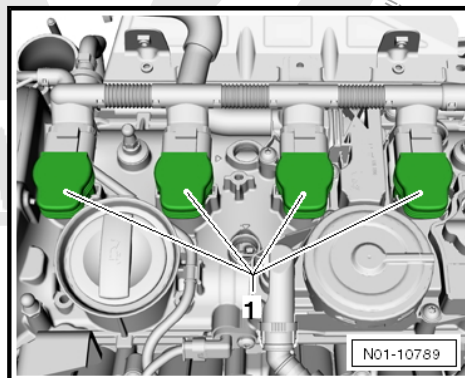
Removing



Note

- ◆ To remove the spark plugs, place the Puller - Ignition Coil -T40039- on the topmost thick rib -arrow- of the ignition coils with power output stages.
- ◆ If the lower ribs are used, they can be damaged.
- Remove the engine cover. Refer to ⇒ [C4.33 over Top, Removing and Installing](#), page 170 .

The spark plugs are located under the ignition coils with power output stages -1-.



- If necessary the wiring guide must be removed from the cylinder head cover.



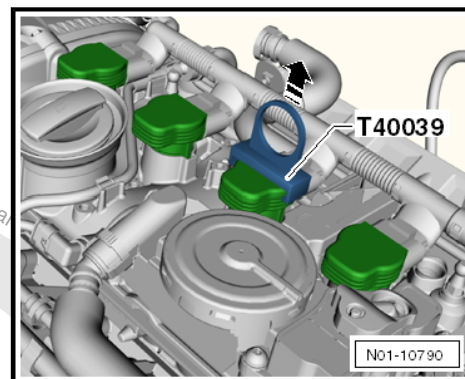
Note

Note the installation position of ignition coils with power output stages!

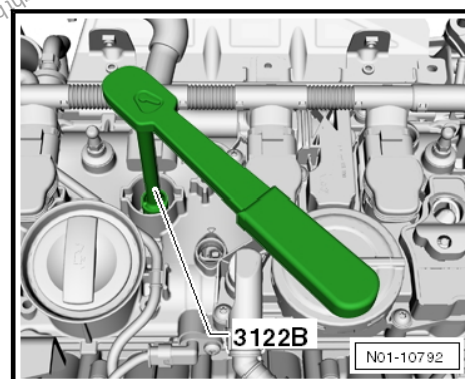
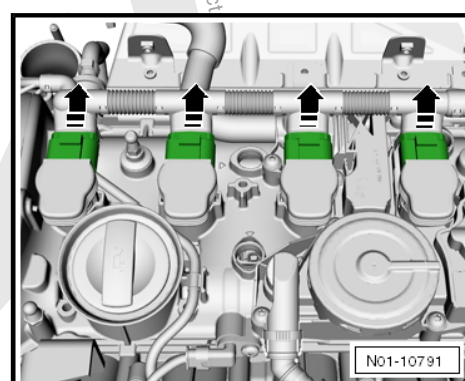
- Using the Puller - Ignition Coil -T40039-, pull all of the ignition coils approximately 30 mm out of the cylinder head in the direction of the arrow.



- Push connector in the direction of ignition coils with power output stages, press catch down by hand and disconnect connectors -arrows-.



- Remove the spark plugs using the Spark Plug Removal Tool -3122 B-.

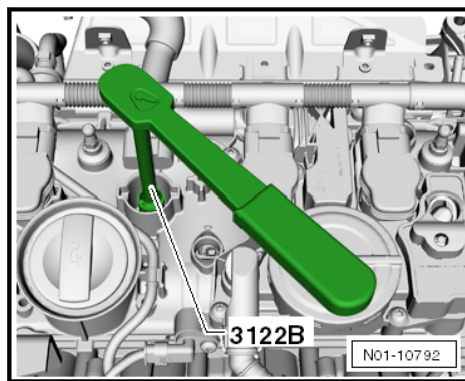


Note

- ◆ *Spark plug identification and tightening specification, »Engine«. Refer to ➤ Engine Mechanical, Fuel Injection and Ignition; Rep. Gr. 28; Test Data, Spark Plugs »Test Data, Spark Plugs«.*
- ◆ *Please follow all waste disposal regulations!*

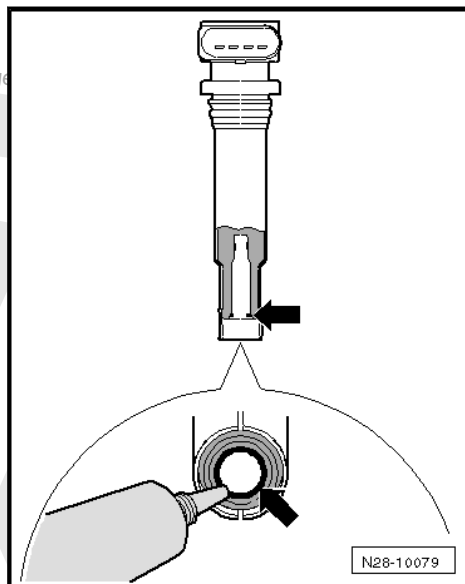
Installing

- Install the new spark plugs using the Spark Plug Removal Tool -3122 B-.

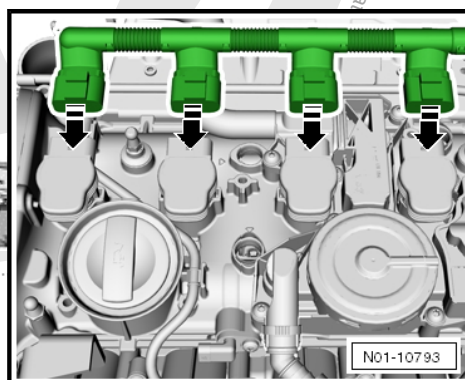


Note

- ◆ When installing new spark plugs, the ignition coils with power output stages must be lubricated with Silicone Paste. Refer to the ➔ Electronic Parts Catalog (ETKA).
- ◆ The correct silicone paste is shown on the Electronic Parts Catalog (ETKA) with the ignition coils and/or the spark plugs.
- Apply a thin bead of Silicone Grease all around the sealing hose on the ignition coil with power output stage -arrow-.

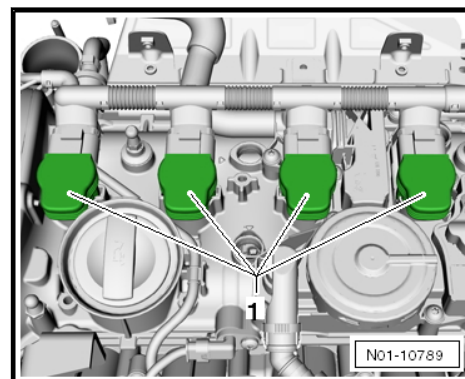


- Guide the ignition coils with power output stages into the cylinder head.



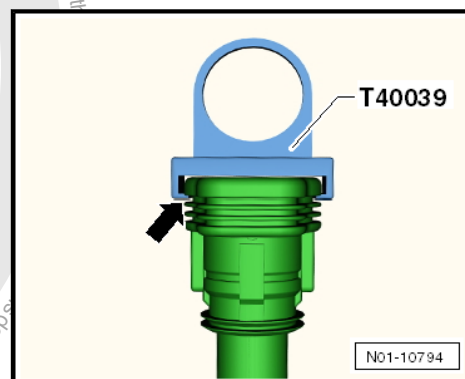


- Align the ignition coils with power output stages into designated recesses of cylinder head cover.
- Connect all the connectors to the ignition coils -arrows-.
- Push the ignition coils with power output stage -1- all the way onto the spark plugs by hand. They must be felt engage.



- If necessary secure the wiring guide on the cylinder head cover.
- Install the engine cover. Refer to ➤ [C4.33 over Top, Removing and Installing](#), page 170 .

4.68.9 Spark Plugs, Replacing, 2.0L TFSI Engines



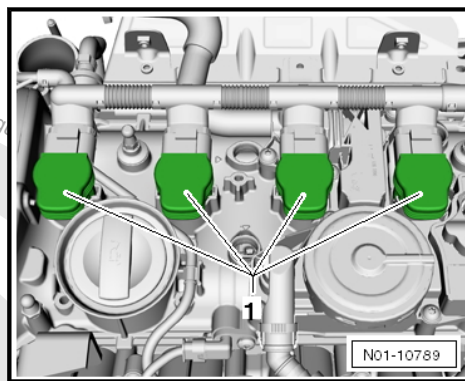
Removing



Note

- ◆ *To remove the spark plugs, place the Puller - Ignition Coil -T40039- on the topmost thick rib -arrow- of the ignition coils with power output stages.*
- ◆ *If the lower ribs are used, they can be damaged.*
- Remove the engine covers. Refer to ➤ [C4.33 over Top, Removing and Installing](#), page 170 .

The spark plugs are located under the ignition coils with power output stages -1-.



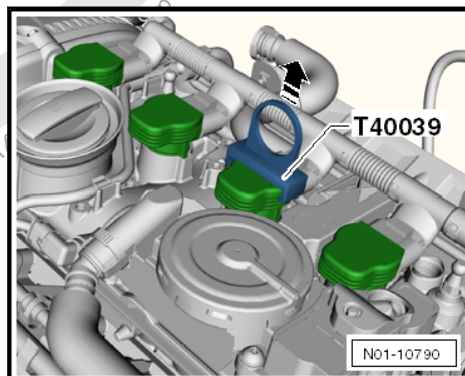
- If necessary the wiring guide must be removed from the cylinder head cover.



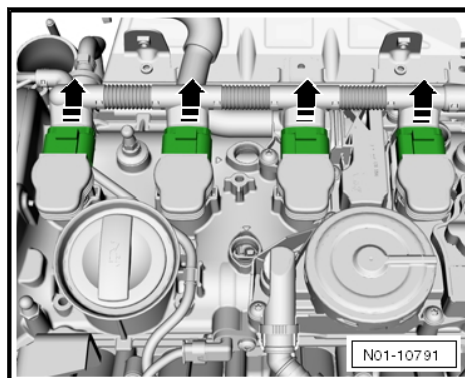
Note

Note the installation position of ignition coils with power output stages!

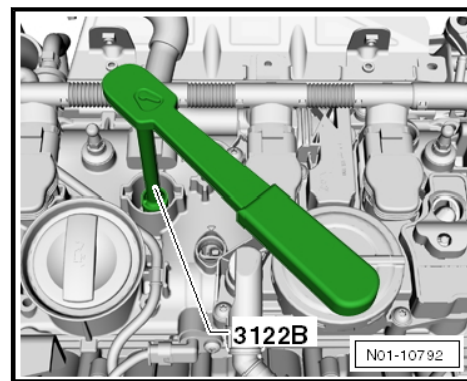
- Using the Puller - Ignition Coil -T40039-, pull all of the ignition coils approximately 30 mm out of the cylinder head in the direction of the arrow.



- Push connector in the direction of ignition coils with power output stages, press catch down by hand and disconnect connectors -arrows-.



- Remove the spark plugs using the Spark Plug Removal Tool -3122 B-.

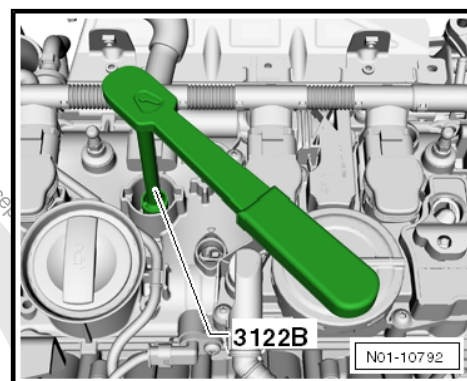


Note

- ◆ *Spark plug identification and tightening specification, »Engine«. Refer to ➤ Engine Mechanical, Fuel Injection and Ignition; Rep. Gr. 28; Test Data, Spark Plugs »Test Data, Spark Plugs«.*
- ◆ *Please follow all waste disposal regulations!*

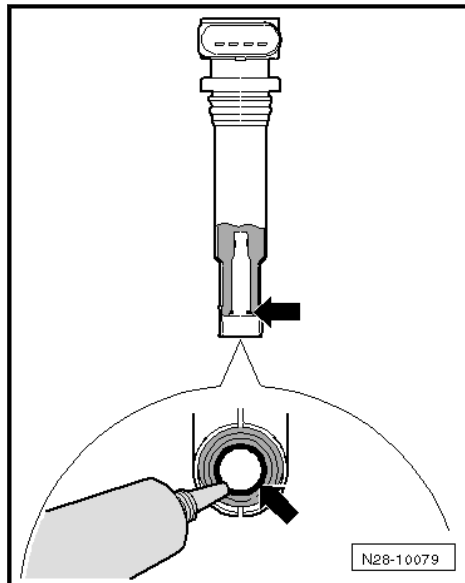
Installing

- Install the new spark plugs using the Spark Plug Removal Tool -3122 B-.

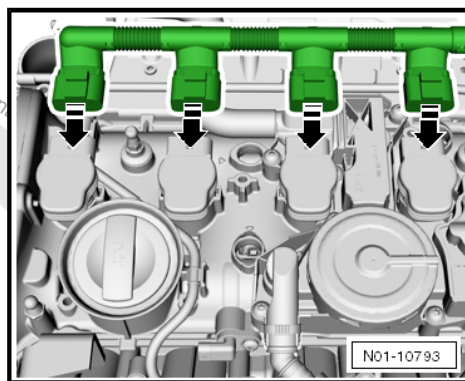


Note

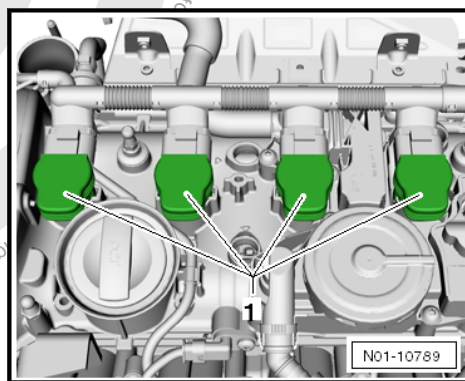
- ◆ *When installing new spark plugs, the ignition coils with power output stages must be lubricated with Silicone Paste. Refer to the ➤ Electronic Parts Catalog (ETKA).*
- ◆ *The correct silicone paste is shown on the Electronic Parts Catalog (ETKA) with the ignition coils and/or the spark plugs.*
- Apply a thin bead of Silicone Grease all around the sealing hose on the ignition coil with power output stage -arrow-.



- Guide the ignition coils with power output stages into the cylinder head.



- Align the ignition coils with power output stages into designated recesses of cylinder head cover.
- Connect all the connectors to the ignition coils -arrows-.
- Push the ignition coils with power output stage all the way onto the spark plugs by hand. They must be felt engage.



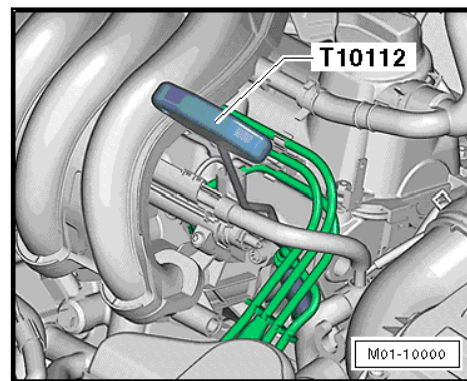
- If necessary secure the wiring guide on the cylinder head cover.
- Install the engine cover. Refer to [⇒ C4.33 over Top, Removing and Installing](#), page 170 .



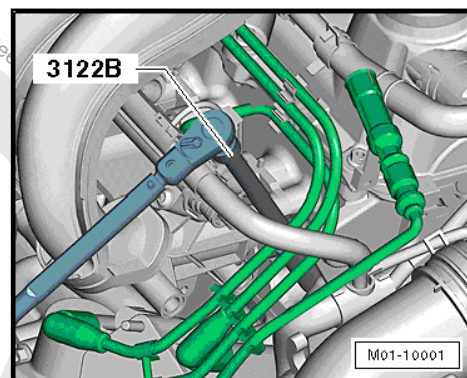
4.68.10 Spark Plugs, Replacing, 2.0L SRE Gasoline

Removing

- Remove the fuel injector connectors for the first and fourth cylinders.
- Remove the spark plug connectors using the Puller - Spark Plug Connector -T10112A-.



- Remove spark plugs using Spark Plug Removal Tool -3122 B-.

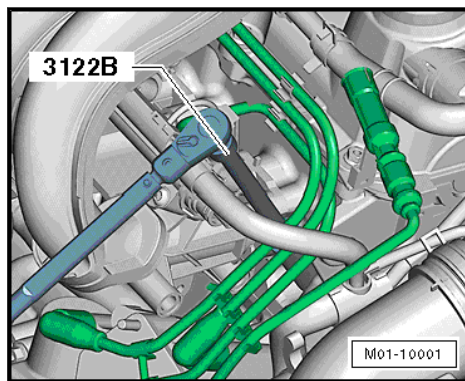


Note

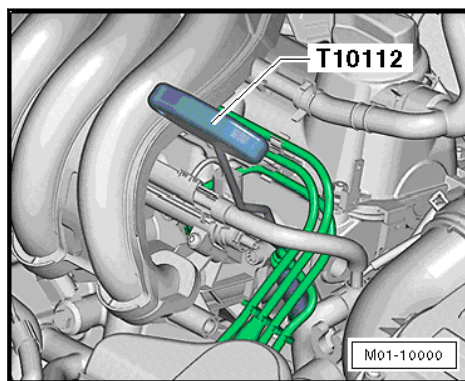
- ◆ *Spark plug identification and tightening specification. Refer to ⇒ Engine Mechanical; Rep. Gr. 28; Test Data, Spark Plugs.*
- ◆ *Please follow all waste disposal regulations!*

Installing

- Install the new spark plugs using the Spark Plug Removal Tool -3122 B-.

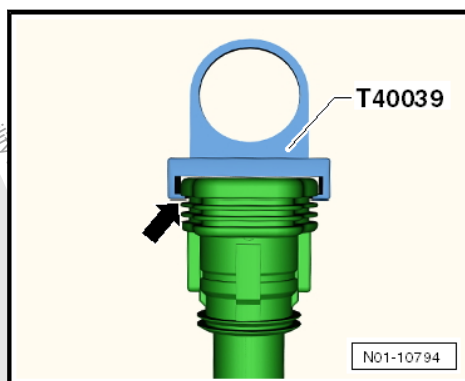


- Connect spark plug connectors using the Puller - Spark Plug Connector - T10112A-.



- Attach the fuel injector connectors.
- Check the connectors for the fuel injectors, ignition wires and spark plugs for secure seating.

4.68.11 Spark Plugs, Replacing, 2.5L SRE Gasoline



Removing



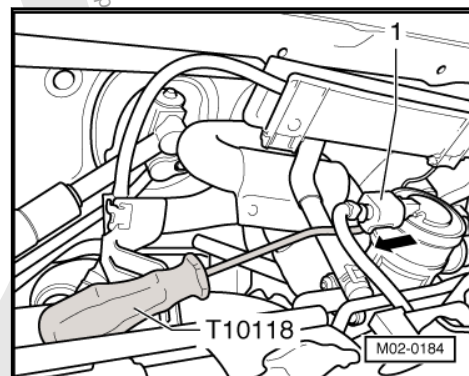
Note

- ◆ To remove the spark plugs, place the Puller - Ignition Coil - T40039- on the topmost thick rib -arrow- of the ignition coils with power output stages.
- ◆ If the lower ribs are used, they can be damaged.
- Remove the engine cover. Refer to [C4.33 over Top, Removing and Installing](#), page 170.



Spark plugs are located under ignition coils with power output stages.

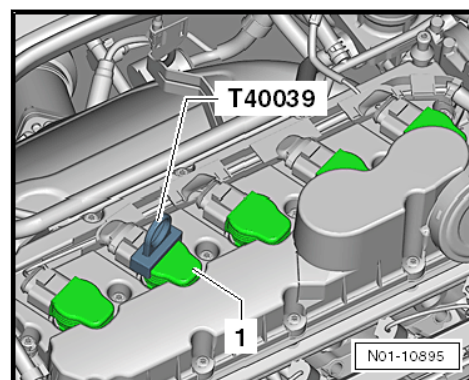
- Disconnect the connector -1- in the direction of the arrow using the Elbow Assembly Tool -T10118-.



Note

It is necessary to pull off the connector so that afterwards the ignition coils with power output stages with connected wires can be set aside without disturbing the routing of the wiring!

- Remove all of the ignition coils with power output stages -1- upward using the Puller - Ignition Coil -T40039-.



Note

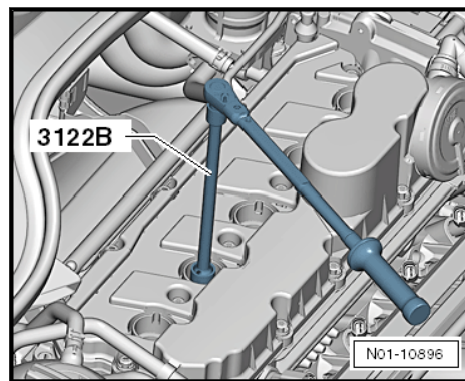
- ◆ *When removing the ignition coils with power output stages, the wiring or the connectors for the ignition coils can remain connected.*
- ◆ *Note the installation position of ignition coils with power output stages!*
- Carefully move the ignition coil with power output stage, with the wires still connected, to the side.



Caution

Make sure to not kink or damage the lines.

- Remove the spark plugs using the Spark Plug Removal Tool -3122 B-.

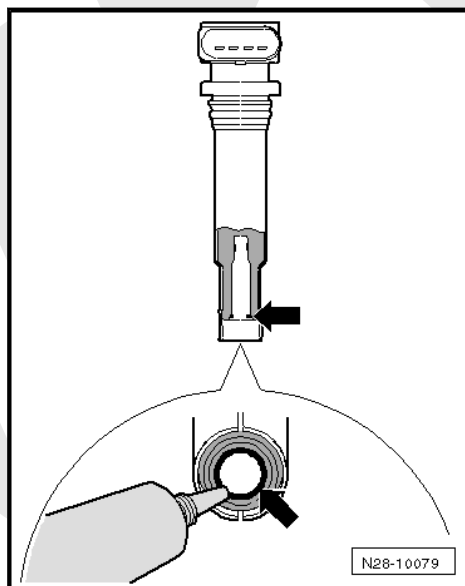


Installing



Note

- ◆ *When installing new spark plugs, the ignition coils with power output stages must be lubricated with Silicone Paste. Refer to the ➔ Electronic Parts Catalog (ETKA).*
- ◆ *The correct silicone paste is shown on the Electronic Parts Catalog (ETKA) with the ignition coils and/or the spark plugs.*
- Install the new spark plugs using the Spark Plug Removal Tool -3122 B- and tighten. Refer to ➔ Engine; Rep. Gr. 28; Test Data, Spark Plugs.
- Apply a thin bead of Silicone Grease all around the sealing hose on the ignition coil with power output stage -arrow-.



- Install the ignition coils with power output stage into the cylinder head and then align them with the openings in the cylinder head cover.
- Push the ignition coils with power output stages all the way onto the spark plugs until they can be felt engage.



Note

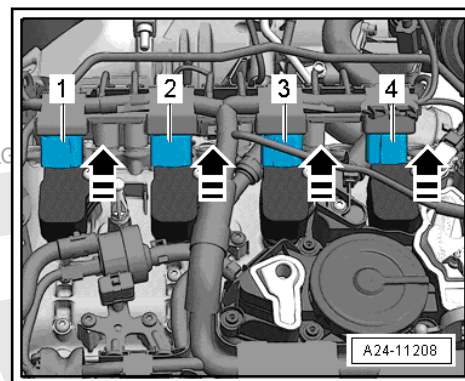
Make sure that the wire routing of the ignition coils with power output stages is correct.

- Install the engine cover. Refer to [⇒ C4.33 over Top, Removing and Installing](#), page 170 .

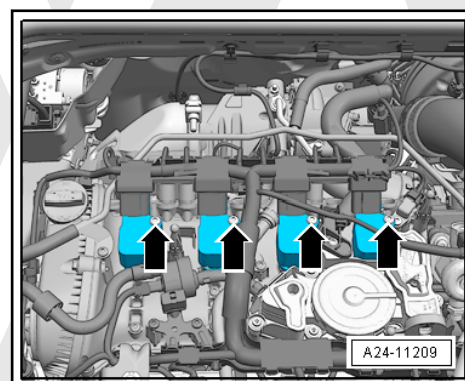
4.68.12 Spark Plugs, Replacing, 1.8L (125kW) and 2.0L (155 kW) TSI Engine

Removing

- Remove the “upper” engine cover. Refer to [⇒ C4.33 over Top, Removing and Installing](#), page 170 .
- Release the connectors -1- through -4- and, at the same time, disconnect all connectors from the ignition coils with power output stages in the direction of the arrow.



- Remove the bolts -arrows- for the ignition coil with power output stage.



- Carefully remove the ignition coil with power output stage upward.



Note

- ◆ *Note the installed position of ignition coils with power output stages.*
- ◆ *Make sure to not kink or damage the lines.*
- Remove the spark plugs using the Spark Plug Removal Tool -3122 B-.



Installing

- Install the new spark plugs using the Spark Plug Removal Tool -VAS 3122B- and tighten to the specification. Refer to [⇒ page 330](#).
- Align all ignition coils with the power output stage one after the other and insert them loosely into the spark plug shaft.
- Press the ignition coil with power output stage evenly by hand onto spark plugs (do not use a striking tool).
- Tighten the bolts for the ignition coil with power output stage to the tightening specification. Refer to [⇒ page 330](#).
- Connect the connector at the same time.
- Install the “upper” engine cover. Refer to [⇒ C4.33 over Top, Removing and Installing](#), page 170.

Tightening Specification	Nm
Spark plugs in cylinder head	30
Bolt for ignition coil with power output stage	10

4.69 DTC Memory for All Systems, Reading with Vehicle Diagnostic Tester and Correcting Faults According to Repair Procedure

Procedure

- Connect the Vehicle Diagnostic Tester. Refer to [⇒ D3.5 iag-nostic Tester, Connecting](#), page 57.
- Select “OBD”.
- Select system “OBD”.
- Read the “Gateway device”.
- Correct any faults according to the repair procedure.



Caution


In every case, the vehicle must be released to the customer with the DTC memory erased.

Static Errors

If one or more static malfunctions exist in the DTC memory, we recommend in agreement with the customer, that these malfunctions be resolved with the help of Guided Fault Finding.

Sporadic Errors

In the case that only sporadic malfunctions or notes are stored in DTC memory and the customer has no complaints in conjunction with an electronic vehicle system, erase the DTC memory.

- Press the “continue”  button again to access the test plan.
- End the Guided Fault Finding: using the GO TO button and then end.

All DTC memories will be checked now once more.



The window that now appears confirms that all sporadic faults were cleared. The diagnostic protocol will be sent automatically "online".

Vehicle system test is completed.





5 Emissions Test

⇒ [T5.1 esting, Gasoline Engines", page 332](#)

⇒ [E5.2 ngine Emissions Testing", page 343](#)

Emissions test intervals:

Vehicles with regulated catalytic converter or vehicles with diesel engine:



Note

- ◆ Pay attention to the country-specific legal regulations.
- ◆ The emissions test described in the following was created according to legal requirements applicable in Germany.
- ◆ 3 years after initial registration and then every 2 years.
- ◆ Vehicles for commercial passenger transportation, for example, taxis: every 12 months

5.1 Emissions Testing, Gasoline Engines



Caution

- Observe the **"NOTES FOR SAFETY, PROTECTION OF EQUIPMENT AND VEHICLE COMPONENTS"** in *Emissions Testing Station owner's manual*.



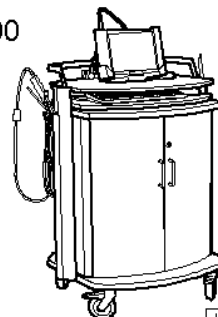
Note

- ◆ The following description refers to vehicles that are equipped with regulated catalytic converter with "OBD".
- ◆ OBD monitors all components and partial systems that influence the emissions quality.

Special tools and workshop equipment required

- ◆ Emissions Testing Station -VAS 6300-
- ◆ Vehicle Diagnostic Tester - Adapter 16-1 -VAS 5052/16-1-

VAS 6300



W00-10034

- ◆ Emissions Testing Station (Interface) XXL -VAS 7300-

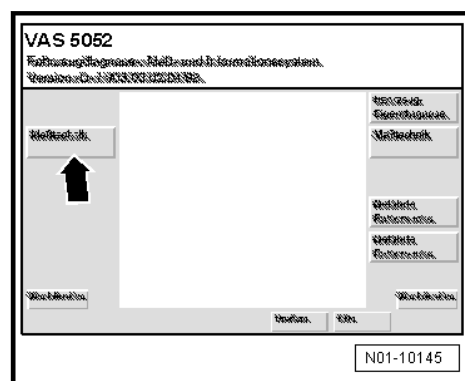
-
- A line drawing of the VAS 7300 mobile medical device. It consists of a main rectangular unit on a four-wheeled cart. The unit has a control panel on the front and a large, adjustable screen on top. The screen is tilted back and displays a simple line drawing of a human figure. The cart has a central vertical support and four casters. The text 'VAS 7300' is visible on the front panel of the unit.

- Note**

- ### Test Requirements:

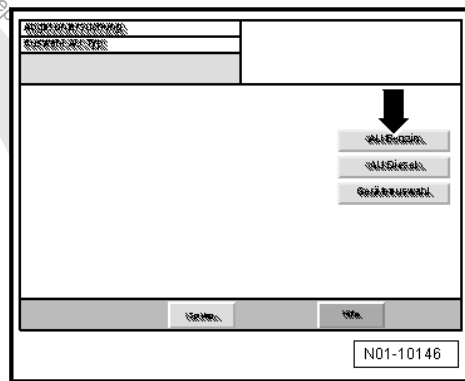
- All test requirements and data required for the emissions test are found on the emissions test data sheet for the corresponding engine.
- If a barcode input of emissions testing specification data is going to be performed, the emissions testing data sheet must be present as a paper print out.
- Automatic transmission: selector lever in “P” or “N” position.
- Manual transmission: gearshift lever in neutral.
- Parking brake applied
- Perform emissions testing according to instructions in the display.

Start Screen:

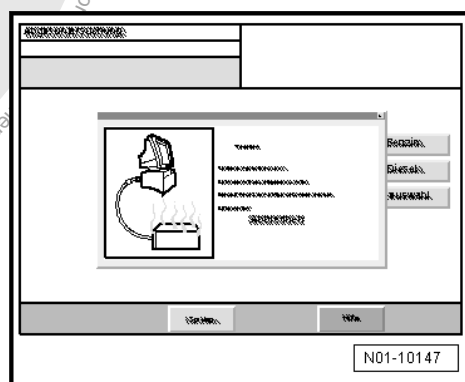


- Arrow -button-, select the “emissions test”.

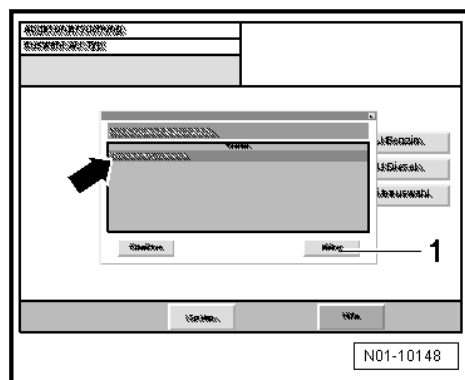
5. Emissions Test 333



- Select “emissions testing, gasoline” -arrow-.
Display for the warm-up time appears.



- Continue the emissions test according to the instructions on the display.



- Then the emissions test specified value appears, select the corresponding “selection for emissions test specified value” -arrow-.
- ◆ Either for a first-time emissions test “standard default values”,
- ◆ Or, if an emissions test that has already been performed is to be performed again “last vehicle”.
- Select “Continue” on the display, see -Item 1-.

Vehicle Data Input:

The vehicle data input menu appears.

- Enter the following data:
- ◆ License plate number



- ◆ Key number
- ◆ VIN
- ◆ Fuel type
- ◆ Odometer reading

The following vehicle data can be found in the certificate of registration part 1:

- ◆ License plate: "for example, WOB-HH 1234"
 - ◆ Emissions key number: "Field 14.1 (Code for field 14)"
 - ◆ Vehicle manufacturer: "Field 2," "Field 2.1 (Code for field 2)"
 - ◆ VIN: "Field E"
 - ◆ Type and version "field D2 (type only)", "Field 2.2 (Code for field D.2)"
- Select "with OBD" -arrow-.

Emissions Test Specified Data Input:

Specification data may be entered differently:

- ◆ 1. Manually
- ◆ 2. Via barcode input from emissions testing data sheet
- ◆ 3. through ELSA service



Note

- ◆ *In order to be able to use ELSA service, the Vehicle Diagnostic Tester used for the emissions test must be integrated in the workshop network.*
- ◆ *When using ELSA service, the vehicle specification data is automatically transferred via the network into the appropriate form.*

Manual Emissions Test Specified Data Input:



Note

All test conditions and data (refer to ⇒ Data sheets for exhaust emission test) required for the emissions test for the corresponding engine.

- Follow the instructions on the display for manual data input.



The “test values for the emissions test” are listed in the emissions testing data sheet.

- Enter the “test values for the emissions test” in the following sequence on the display:

- 1 - Test RPM (Idle Speed)
 - 2 - Warm-Up Time for Catalytic Converter
 - 3 - Engine Temperature
 - 4 - Increased Idle Speed
 - 5 - CO Content at Increased Idle
 - 6 - Oxygen in Increased Idle
 - 7 - Idle Speed
 - 8 - Select the upstream oxygen sensor type, either “switching sensor” or “broadband sensor”-item 1-.
 - 9 - Heated Oxygen Sensor Value
- All data has been entered correctly, then press the “Continue” button -arrow-.

Emissions test specified data input as bar code:

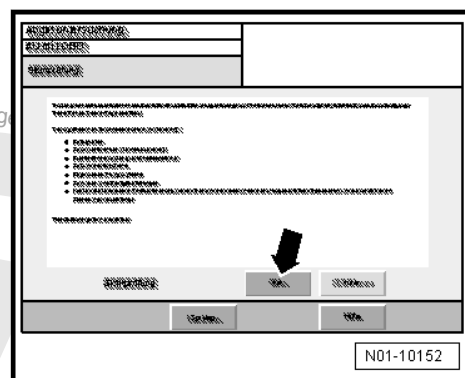
- If the emissions test specified data is available as a bar code, scan in the bar code of emissions testing data sheet using bar code reader.

Screen containing all required data appears on the display.

- Press the  button -arrow- to continue the procedure.



Visual Inspection:



- Follow the instructions on the display.
- Perform visual inspections.
- If the visual inspection is OK, press the “OK” button -arrow-.



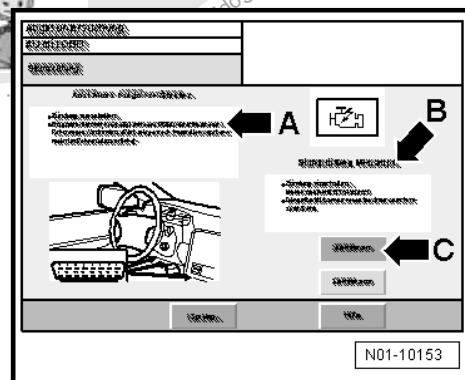
Note

Testing is started by pressing the NOT OK button.

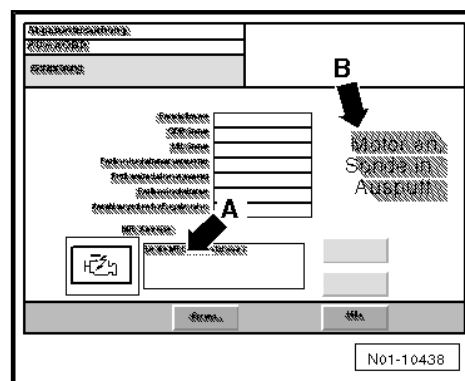
Diagnostic Connector, Connecting:

- Ignition is switched off.

In the visual inspection display, it is requested that the Data Link Connector (DLC) be attached -arrow A-, and the malfunction indicator lamp (MIL) be checked -arrow B-.

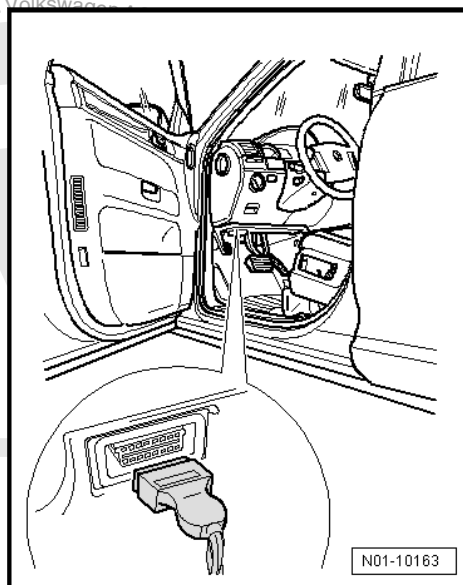


- Follow the instructions on the display -arrow A- and -arrow B-.



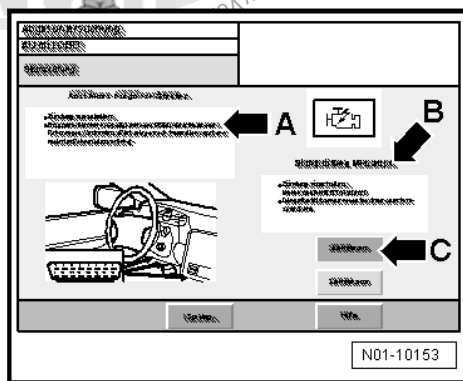


- Connect the diagnostic cable connector to the EOBD connection.



Visual Inspection of Malfunction Indicator Lamp with Engine Off:

- Switch the ignition on.
- Perform the visual inspection of the malfunction indicator lamp ("MIL").
- When the lamp turns on, press the button "Lamp On"-arrow C-.

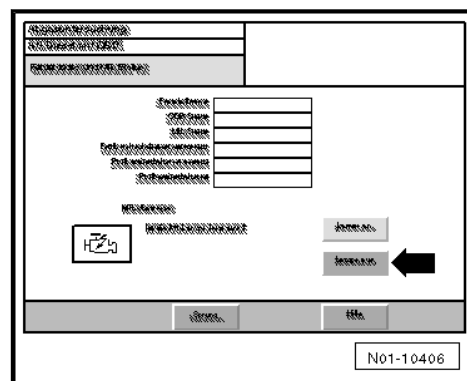


Note

If the malfunction indicator lamp does not come on during the visual inspection, the result of the emissions is "failed".

Visual Inspection of Malfunction Indicator Lamp with Engine Running:

- Start the engine and confirm engine is running via "Yes" on the display.
- Visually inspect the malfunction indicator lamp. The lamp must not come on any more or blink.
- Confirm the condition of the malfunction indicator lamp -arrow-.



The program automatically advances to the test-readiness check.

Here it is tested whether all test-readiness checks supported by the control module have been run through.

- Guide the exhaust probe into the tail pipe.



Note

Emissions Test procedure will only continue when measuring probe is located in exhaust tail pipe.



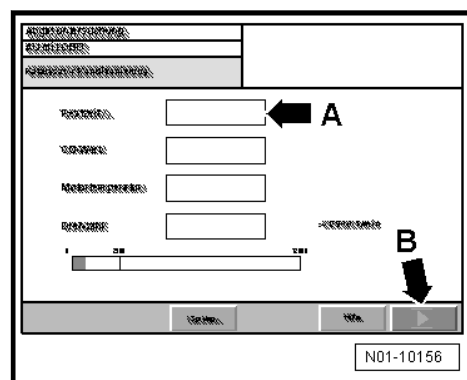
Note

- ◆ If all display values are set to zero, no control sensor test is performed.
- ◆ If not all display values are set to zero, a control sensor test will be performed later.

Catalytic Converter Conditioning:

The program automatically advances to the warm-up phase of the catalytic converter.

- Follow the instructions on the display.



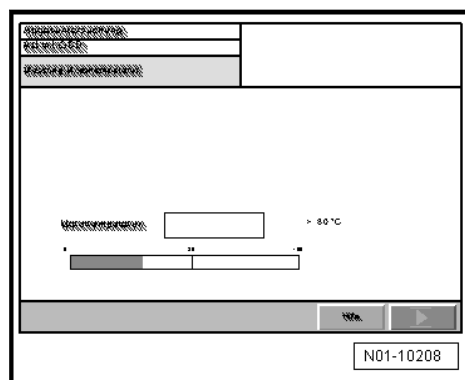
Measurement begins when engine speed has reached the necessary level.

- Hold the engine speed in the required RPM range.

The remaining time for performing the pre-heating phase is displayed -arrow A-.



Warm-Up Time:



The program automatically advances to the display for measuring the engine temperature.

- Follow the instructions on the display.

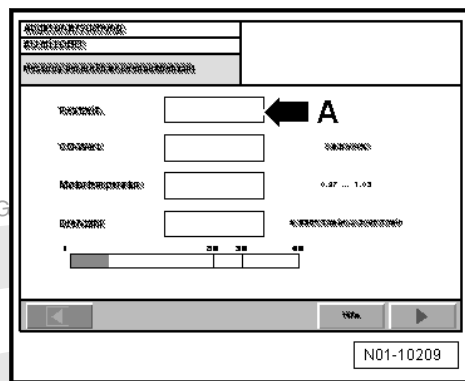


Note

This display appears only when engine temperature has not yet reached 80 degrees Celsius.

- Bring the engine to the required temperature.

Measurement at Increased Idle Speed:





The program automatically advances to the display for the measurement at increased idle speed.

- Follow the instructions on the display.

Measurement begins when engine speed has reached the necessary level.



Note

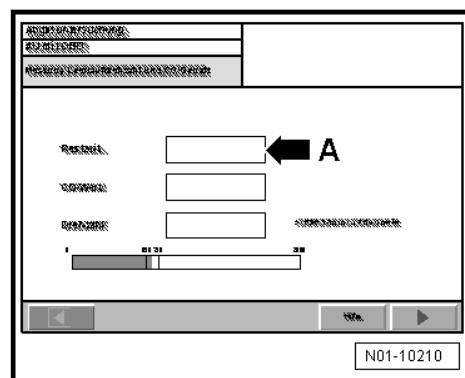
- ♦ By pressing the  button the measurement can be skipped. The emissions test is not passed.
- ♦ With the  button the measured values are reset. The test can be repeated.

- Hold the engine speed in the required RPM range.

The remaining time for performing the measurement is displayed -arrow A-.



Idle Speed and CO Content Measurement:



The program automatically advances to the display for measuring the idle speed and CO content.

Measurement begins when engine speed has reached the necessary level.

The remaining time for performing the measurement is displayed -arrow A-.

Upstream Oxygen Sensor Test:



Note

The upstream oxygen sensor test is only performed when all display values are "NOT" set to zero during the test-readiness check.

The program automatically advances to the display for the upstream oxygen sensor test.



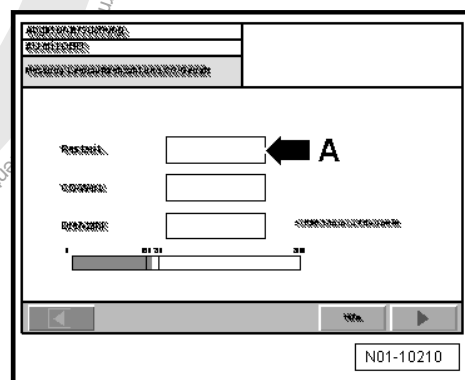
Note

The upstream oxygen sensor test is performed separately for each heated oxygen sensor.

Measurement begins when engine speed has reached the necessary level.

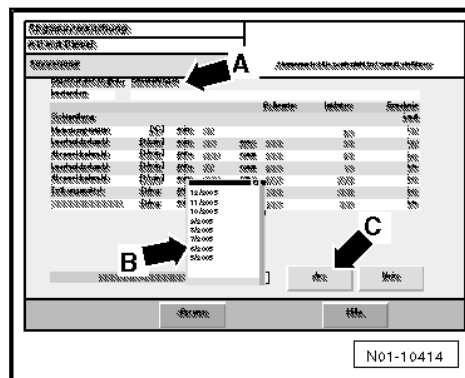
- Hold the engine speed in the required RPM range.

The remaining time for performing the measurement is displayed -arrow A-.





Evaluation:



After the emissions test is completed, the log is displayed on the screen.

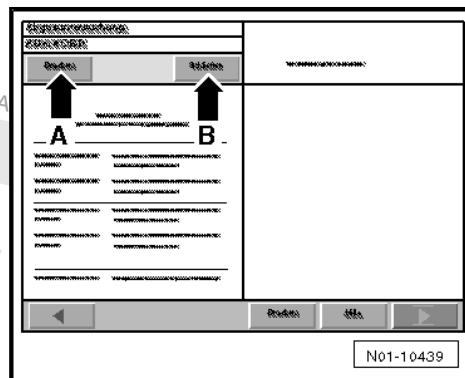
The test result is displayed.


Explanations regarding the emission test can be entered here -arrow A- and can be entered into the test report.

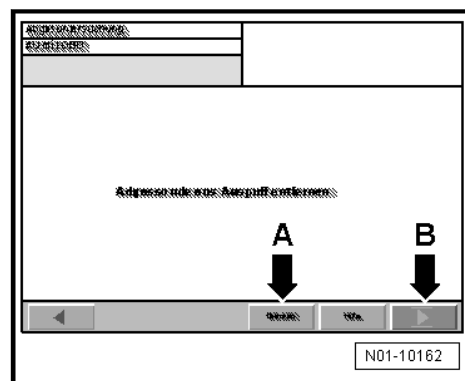
- If the emissions test was passed, select "Grant emissions test certificate" and the date in the "dropdown" menu -arrow B-.
- Confirm with "yes" -arrow C-.

The emissions test log is shown in the display and can be printed as many times as desired in the "print preview" menu via the "Print" button -arrow A-.

- Press the "close" button -arrow B-. The "print preview" menu is closed.



- Follow the instructions on the display.
- Remove the exhaust probe from the tail pipe.
- Then press the button  -arrow B-.



The emissions test is completed. A new emissions test can be performed.

5.2 Diesel Engine Emissions Testing



Caution

- Observe the **"NOTES FOR SAFETY, PROTECTION OF EQUIPMENT AND VEHICLE COMPONENTS"** in Emissions Testing Station owner's manual.

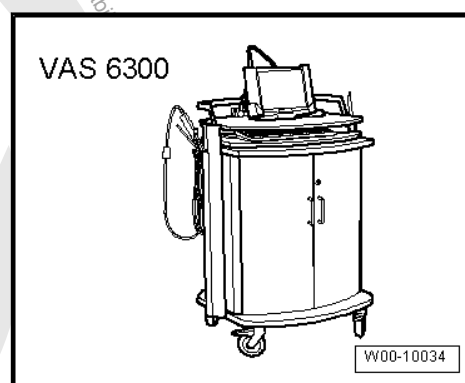


Note

- ◆ Whether vehicles are or are not equipped with "On Board Diagnostic (OBD)" are listed in the engine overview Refer to [⇒ O1 verview, page 1](#).
- ◆ The following description is based on vehicles that are equipped with "On Board Diagnostics", OBD.
- ◆ OBD monitors all components and partial systems that influence the emissions quality.

Special tools and workshop equipment required

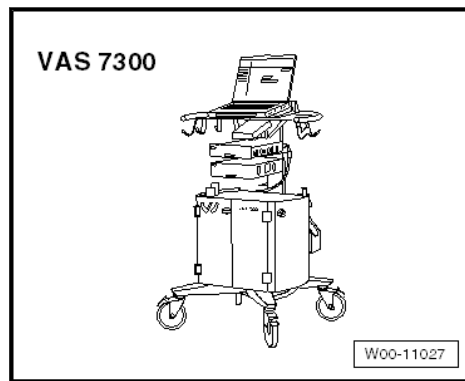
- ◆ Emissions Testing Station -VAS 6300-



- ◆ Vehicle Diagnostic Tester - Adapter 16-1 -VAS 5052/16-1-
- ◆ Emissions Testing Station (Interface) XXL -VAS 7300-



- ◆ Emissions Testing Station (Remote Control) XXL -VAS 7300-



- ◆ Diagnosis Interface - Cable with Pull Relief -VAS 5055/2-
- ◆ Vehicle Communication Interface (VCI) -VAS 6154-
- ◆ Diagnosis Interface -VAS 5055-



Note

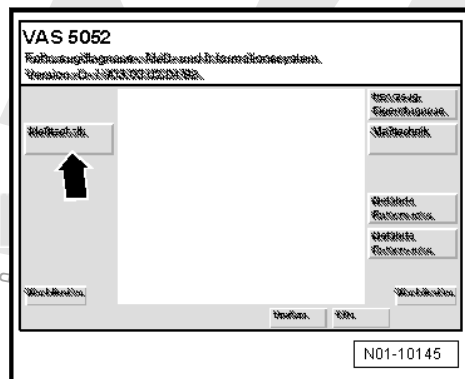
- ◆ *An emissions test is only possible when all units of Emissions Testing Station are connected properly according to operating instructions and are connected to each other.*
- ◆ *All procedures being performed are displayed on the Emissions Testing Station.*

Test Requirements:

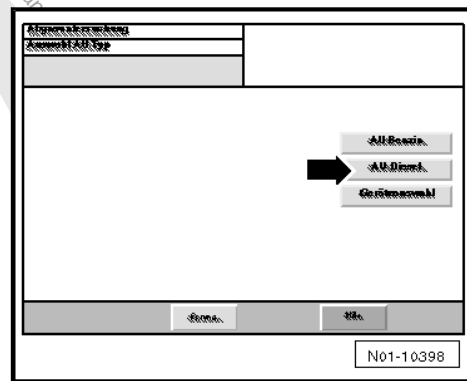
- All test requirements and data required for the emissions test are found on the emissions test data sheet for the corresponding engine.
- If a barcode input of emissions testing specification data is going to be performed, the emissions testing data sheet must be present as a paper print out.
- Automatic transmission: selector lever in "P" or "N" position.
- Manual transmission: gearshift lever in neutral.
- Parking brake applied
- Perform emissions testing according to instructions in the display.

Start Screen:

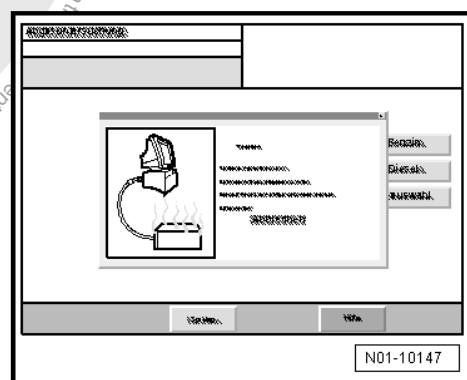
- Select the "emissions test" button -arrow-.



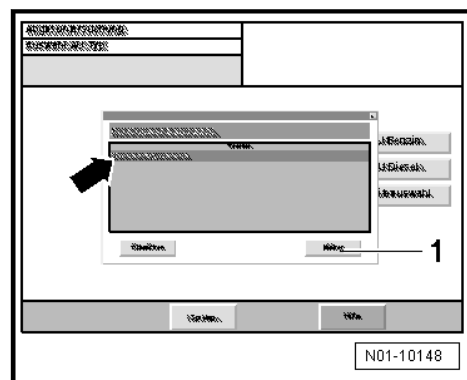
An overview for selecting the respective emissions test type appears.



- Select “diesel emissions testing” -arrow-.
Display for the warm-up time appears.



- Continue the emissions test according to the instructions on the display.



- Then the emissions test specified value appears, select the corresponding “selection for emissions test specified value” -arrow-.
- ◆ Either for a first-time emissions test “standard default values”,
- ◆ or, if an emissions test that has already been performed is to be performed again “last vehicle”.
- Select “Continue” -item 1- on the display.

Vehicle Data Input:

The vehicle data input menu appears.

- Enter the following data:
- ◆ License plate number



- ◆ Key number
- ◆ Vehicle Identification Number (VIN)
- ◆ Fuel type
- ◆ Odometer reading

The following vehicle data can be found in the certificate of registration part 1:

- ◆ License plate: "for example, WOB-HH 1234"
- ◆ Emissions key number: "Field 14.1 (Code for field 14)"
- ◆ Vehicle manufacturer: "Field 2," "Field 2.1 (Code for field 2)"
- ◆ VIN: "Field E"
- ◆ Type and version "field D2 (type only)", "Field 2.2 (Code for field D.2)"



Note

- ◆ Use the **GO TO** button to start other functions.
- ◆ Use the **GO TO** button to cancel the emissions test.
- Select "Diesel OBD" -arrow-.

The screenshot shows a software interface for emissions testing. It features several input fields for data entry, including fields for license plate, VIN, and other vehicle details. There are also buttons for 'GO TO' and 'GO TO' (cancel). A large black arrow points to the 'GO TO' button. The interface is titled 'Emissions Test Specified Data Input'.

Emissions Test Specified Data Input:

Specification data may be entered differently:

- ◆ 1. Manually
- ◆ 2. Via barcode input from emissions testing data sheet
- ◆ 3. through ELSA service



Note

- ◆ In order to be able to use ELSA service, the Vehicle Diagnostic Tester used for the emissions test must be integrated in the workshop network.
- ◆ When using ELSA service, the vehicle specification data is automatically transferred via the network into the appropriate form.

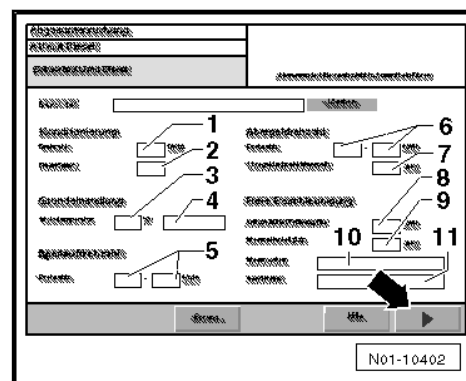
Manual Emissions Test Specified Data Input:




Note

All test conditions and data (refer to ➤ Data sheets for exhaust emission test) required for the emissions test for the corresponding engine.

- Follow the instructions on the display for manual data input.



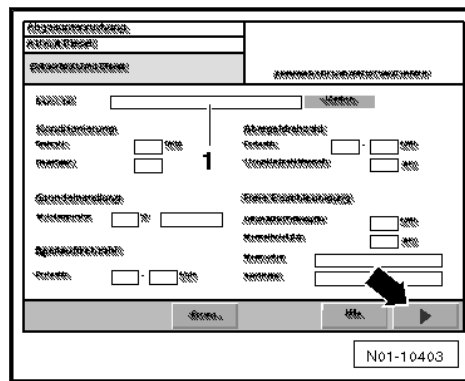
The “test values for the emissions test” are listed in the emissions testing data sheet.

- Enter the “test values for the emissions test” in the following sequence on the display:
 - 1 - Speed for Conditioning
 - 2 - Number of Throttle Bursts for Conditioning
 - 3 - Engine Oil Temperature (Minimum Value)
 - 4 - Select method for measuring engine oil temperature
 - 5 - Idle Speed
 - 6 - Speed Regulation
 - 7 - Speed regulation from breakaway point measurement time (1 sec.)
 - 8 - Turbidity Value (Arithmetic Mean)
 - 9 - Select Sensor Type (Sensor Number)
 - 10 - Select the measuring mode
 - 11 - Measurement Time Amount
- Press the  button - arrow - once all the data has been entered correctly.

Emissions test specified data input as bar code:

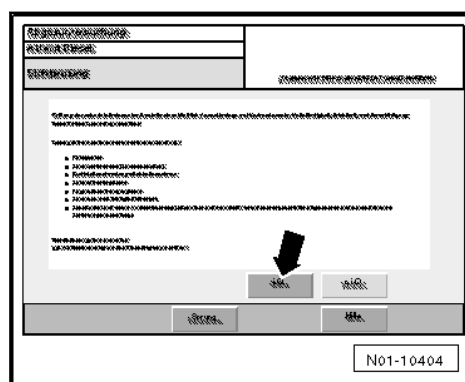
- If the emissions test specified data is available as a bar code, scan in the bar code of emissions testing data sheet using bar code reader.

The display -1- with all the required data appears on the screen.



- Press the button -arrow- to continue the procedure.

Visual Inspection:



- Follow the instructions on the display.
- Perform visual inspections.
- If the visual inspection is OK, press the “OK” button -arrow-.



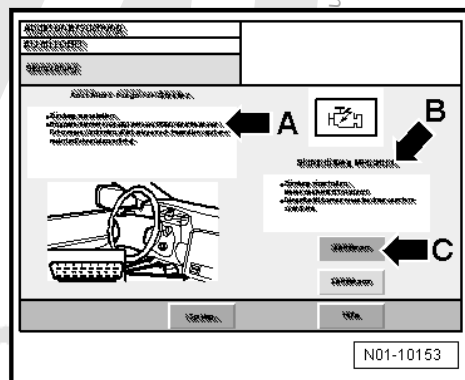
Note

Testing is started by pressing the NOT OK button.

Diagnostic Connector, Connecting:

- Ignition is switched off.

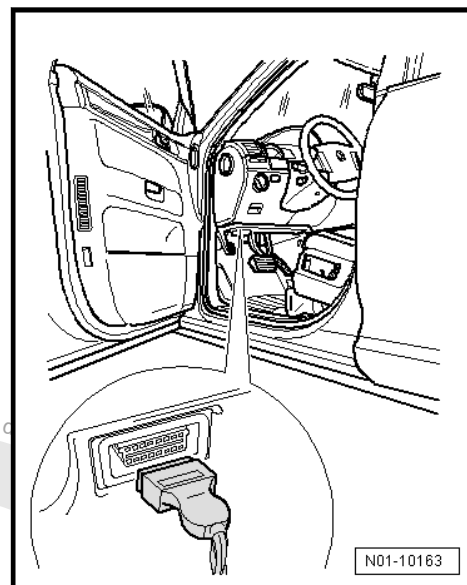
In the visual inspection display, it is requested that the Data Link Connector (DLC) be attached -arrow A-, and the “MIL” be checked -arrow B-.



- Follow the instructions on the display.

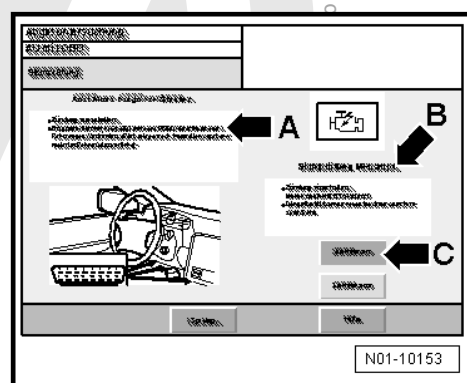


- Connect the diagnostic cable connector to the EOBD connection.



Visual Inspection of Malfunction Indicator Lamp with Engine Off:

- Switch the ignition on.
- Visually inspect the "MIL lamp".
- When the lamp turns on, press the button "Lamp On"-arrow C-.

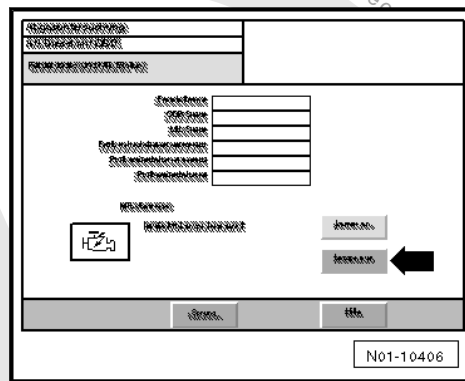


Note

If the malfunction indicator lamp does not come on during the visual inspection, the result of the emissions is "failed".

Visual Inspection of Malfunction Indicator Lamp with Engine Running:

- Start the engine and confirm engine is running via "Yes" on the display.
- Visually inspect the "MIL lamp". The lamp must not come on any more or blink.
- Confirm the condition of the "MIL lamp" -arrow-.



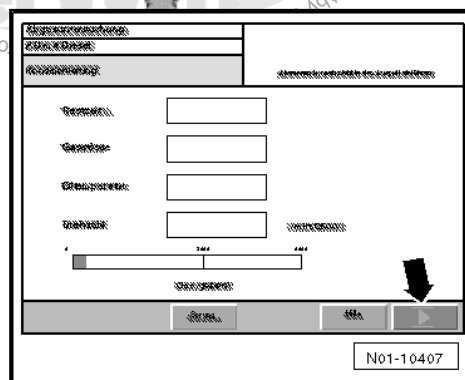
The program automatically advances to the test-readiness check.

Here it is tested whether all test-readiness checks supported by the control module have been run through.

Conditioning:

During the conditioning phase, the engine and any emissions control system are brought to operating temperature via throttle bursts and are thus prepared for the emissions test.

- Follow the instructions on the display.



- Hold the engine speed in the required RPM range.

If no further conditioning is required, press the  button -arrow- to advance to the next measurement.

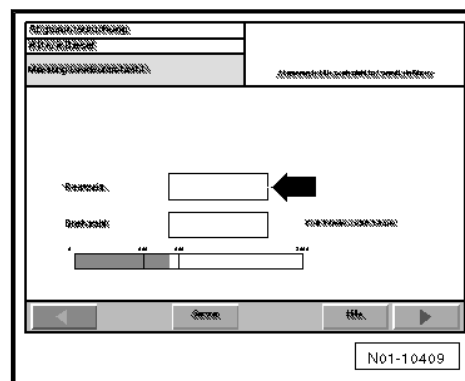
Engine Temperature, Reading Out:

The engine temperature is read out from the engine control module via the diagnostic connector.

After reaching the required engine temperature, the program automatically advances to the display for measuring the idle speed.

Idle Speed Measurement:



- Follow the instructions on the display.



Measurement begins when engine speed has reached the necessary level.



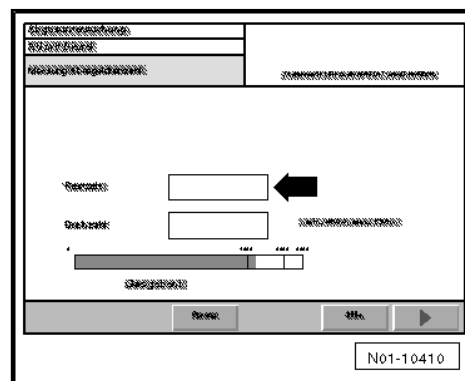
Note

- ◆ Do not insert the exhaust probe into the tail pipe yet.
- ◆ By pressing the  button the measurement can be skipped. The emissions test is not passed.
- ◆ With the  button the measured values are reset. The test can be repeated.
- Hold the engine speed in the required RPM range.

The remaining time for performing the measurement is displayed -arrow-.

Speed Regulation Measurement:

The program automatically advances to the display for measuring the speed regulation.




Measurement begins when engine speed has reached the necessary level.

- Press the gas pedal until the measurement has expired. To do so, press the accelerator pedal downward immediately.



Note


- ◆ If the engine speed limitation is set, then deactivate it for the emissions test.
- ◆ Turn on the ignition and then press the  button until the corresponding symbol in the instrument cluster blinks.



The remaining time for performing the measurement is displayed -arrow-.

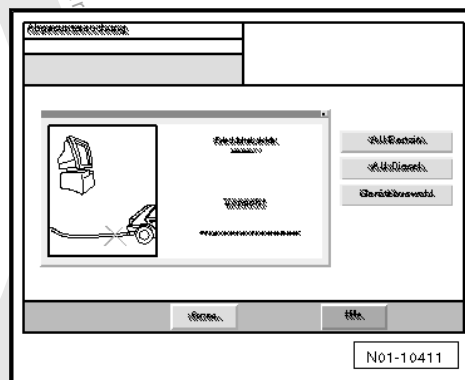


Note

- ◆ Do not insert the exhaust probe into the tail pipe yet.
- ◆ By pressing the  button the measurement can be skipped. The emissions test is not passed.

Fresh Air Comparison:

A fresh air comparison is performed before free acceleration. The exhaust probe must never be in the tail pipe for this. Otherwise, measurement errors or error messages may result during the following measurements.



- After completing the fresh air comparison, insert the exhaust probe into the tail pipe.

Free Acceleration:

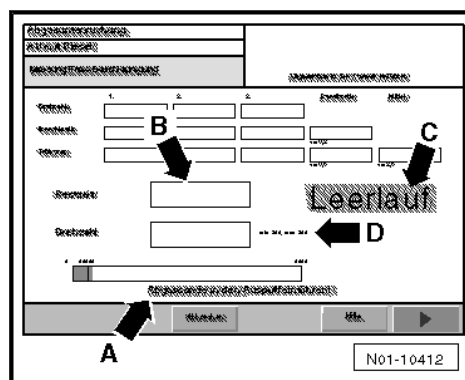
The program automatically advances to the display for "Free acceleration".

During "free acceleration", the engine is accelerated without load as quickly as possible to the speed regulation.

The "free acceleration" test consists of a minimum of four individual accelerations.

Free Acceleration - Phase 1:

- Follow the instructions on the display -arrow A- and -arrow C-.




- Hold idle speed in the specified RPM range -D arrow-.

The remaining time for completing the measurement is displayed -arrow B-.

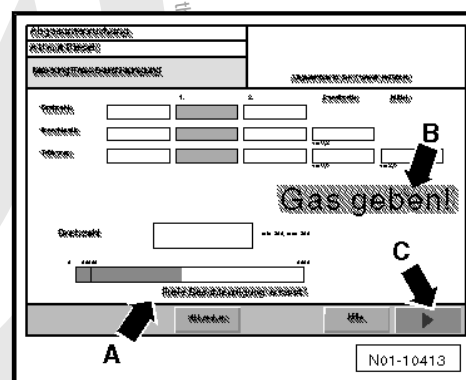


Note

- ◆ The exhaust probe must be in the tail pipe.
- ◆ If the speed deviates from the speed range entered, the measurement begins again.
- ◆ By pressing the  button the measurement can be skipped. The emissions test is not passed.

Free Acceleration - Phase 2:

- Follow the instructions on the display -arrow B-.



- When prompted to accelerate, press the accelerator pedal all the way down and hold until the prompt to idle appears on the display.

Free Acceleration - Phase 3:

- Take your foot from the accelerator pedal as soon as the prompt shows idle in the display -arrow B-. Let engine run at idle.

The result of the measurement, as well as information about the "free acceleration" just performed appears on the display -arrow A-. If the checked values are not OK, information regarding the causes of the "free acceleration" not being OK are shown.

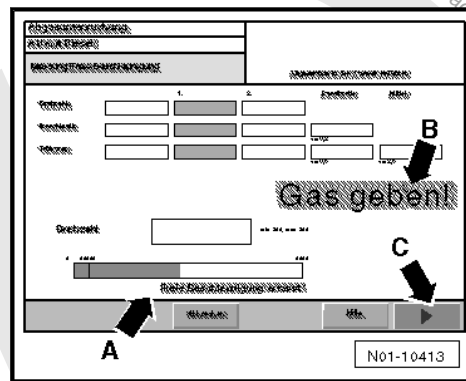


Note

- ◆ A white-colored field indicates that the measured value is within the tolerance.
- ◆ A red-colored field indicates that the measured value is not within tolerance.
- ◆ A yellow-colored field indicates that the measured value is not within tolerance. It can, however, be evaluated by the operator.

Additional Individual Accelerations:

- Follow the instructions on the display -arrow B-.



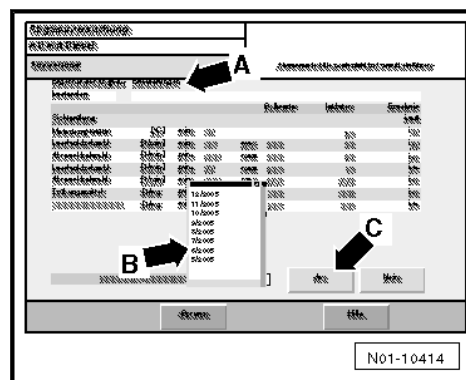
The next individual acceleration begins again with phase 1 of "Free Acceleration".

So many "free accelerations" can be performed until:

- ◆ Three "free accelerations" performed one after another have passed and the acceleration range is OK while doing so.
- ◆ All the values are OK except the acceleration range; and the ☐ button -arrow C- is pressed to continue the test sequence. (The assessment of whether the value is OK is made by the technician in this case.)
- ◆ The values are not OK and the measurement is ended/skipped by pressing the ☐ button -arrow C-.

If all measured values are OK after three consecutive throttle bursts (all fields are highlighted in white) indicating emissions test has passed.

Evaluation:



After the emissions test is completed, the log is displayed on the screen.

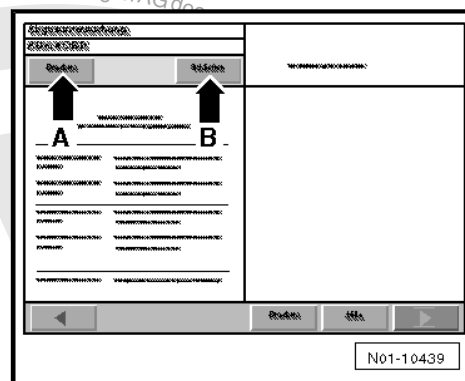
The test result is displayed.

Explanations regarding the emission test can be entered here -arrow A- and can be entered into the test report.

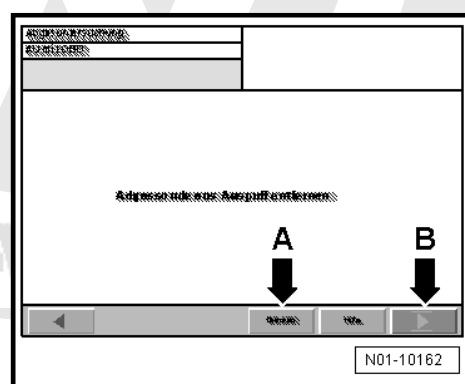
- If the emissions test was passed, select Grant emissions test certificate on the drop-down menu -arrow B- and the date.
- Then confirm with "yes" -arrow C-.

The emissions test log is shown in the display and can be printed as many times as desired in the "print preview" menu via the "Print" button -arrow A-.

- Push the "close" button -arrow B-, the "print preview" menu closes.



- Follow the instructions on the display.
- Remove the exhaust probe from the tail pipe.
- Then press the button -arrow B.



The emissions test is completed. A new emissions test can be performed.



6 Glossary

These descriptions only apply to "Maintenance". They are not intended to be universally applicable.

Term	Description
ABS	ABS: the ABS is a regulation device in the brake system, that prevents the wheels from locking up while braking. Thereby, directional stability and steering ability are retained.
ASR	Anti-Slip Regulation; the ASR that the wheels when slip when driving.
Automatic Transmission Fluid	Automatic Transmission Fluid: transmission fluid for automatic transmissions.
AU	Emissions Test
AUS 32	Is the abbreviation for the English term "Aqueous Urea Solution" with 32.5 % urea, see AdBlue®. Refer to ➤ page 356 .
AdBlue®	Is a created name. This fluid is also called "NOx reducing agent AUS 32", "AUS 32" or for the USA, "Diesel Exhaust Fluid". AdBlue® is a clear reducing agent, is used for treating exhaust gas and to reduce nitrogen oxide and particles. AdBlue® is a registered trademark of the Automobile Manufacturers Association (VDA) in the USA, Germany, the European Union and other countries. The AdBlue urea solution is not mixed with diesel fuel but rather it has its own tank in the vehicle.
ATF level	"Fill height" of ATF in transmission.
BEV	Battery Electric Vehicle; Electric Vehicle
CNG	Compressed Natural Gas
CO	Carbon monoxide: results by incomplete combustion of fuels containing carbon
Common Rail "CR"	English term; refers to a shared high-pressure fuel injection line "Rail", that supplies fuel to all cylinders of a respective cylinder bank.
Diesel Exhaust Fluid	Name in the USA, for NOx reducing agent AUS 32 or AdBlue®
DIN	Deutsches Institut für Normung e.V (German Institute for Standards)
DLA	Dynamic Light Assist; the system makes it possible that with variable road illumination, to drive continually with high beams without blinding oncoming traffic.
DPF	Diesel particulate filter
DS	Direct shift
DSG	Direct Shift Gearbox (Dual Clutch Transmission)
DWA	Anti-Theft Alarm System
ECE	Economic Commission for Europe
ETKA	Electronic Parts Catalog (ETKA)
ET-No.	Part number abbreviation
EN	Euro-Norm
EOBD	Euro On Board Diagnostic (OBD)
ESP	Electronic stability program (it prevents the vehicle from sliding by applying the brakes through the electronic engine management).
FAME	Fatty Acid Methyl Ester
HEV	Hybrid Electric Vehicle
IGG	Instandhaltung genau genommen (Maintenance)
LongLife Service	The LongLife service makes it possible to have extremely long inspection and oil change intervals, depending on individual driving habits and operating conditions. A special engine oil is required for LongLife Service.
LED	Light-Emitting Diode
LPG	Liquefied Petroleum Gas
MIL	Malfunction Indicator Light; American term for the Malfunction Indicator Lamp -K83-



Term	Description
MPI	Multi Point Injection
North America	Within North America
NSC	National Sales Company
NOx reduction agent AUS 32	For urea-water solution complying to DIN ISO 22241-1, see also AdBlue® ➤ page 356
NO _x reducing agent AUS 32	For urea-water solution complying to DIN ISO 22241-1, see also AdBlue® ➤ page 356
OBD	On Board Diagnostic: OBD monitors all components which influence the emission quality
OBD-II	American On Board Diagnostic (OBD)
PHEV	Plug-in Hybrid Electric Vehicle; vehicle with hybrid engine, whose battery additionally can be externally charged by the power supply.
PR number	Abbreviation for the production control number They identify special equipment, differences for specific countries among other things
PM	English: particulate matter; soot particle value of Diesel engine emissions
PMS	Particulate reduction system
QG0	Vehicles that are “not” equipped at the factory with the components for LongLife service. Time and distance dependent intervals (fixed intervals) apply for maintenance.
QG1	Vehicles equipped at the factory with active LongLife service. That means vehicles have a flexible service interval display and are equipped with the following components: <ul style="list-style-type: none"> ◆ Flexible service interval display inside the instrument cluster ◆ Engine oil level sensor ◆ Brake pad wear indicator
QG2	LongLife service is not activated at the factory. This means, vehicles have a fixed service interval display (time and distance dependent maintenance intervals) and are equipped with the following components: <ul style="list-style-type: none"> ◆ Fixed service interval display in instrument cluster ◆ Engine oil level sensor ◆ Brake pad wear indicator
QG3	LongLife service is not activated at the factory. This means, vehicles have a fixed service interval display (time and distance dependent maintenance intervals) and are equipped with the following components: <ul style="list-style-type: none"> ◆ Fixed service interval display in instrument cluster ◆ Brake pad wear indicator
®	Registered trademark
Readiness code	8-bit binary code, that displays if all exhaust gas relevant diagnosis was performed by the electronic engine management
RON	Research octane number: measurement for the knock resistance of gasoline
DPF	Particulate filter
TPM, TPI	Tire pressure monitoring system, tire pressure monitoring system display
SAE	Society of Automotive Engineers; society that creates proposals / guidelines for how regulations can be transcribed (for example standards)
SCR	The Selective Catalytic Reduction (SCR) drastically reduces the amount of nitric oxide in the exhaust gas and uses a urea solution to change it into water vapor and nitrogen. A special urea solution, AdBlue®, is injected into the exhaust gas system by a special catalytic converter.
SRE	Multi-Port Fuel Injection
SULEV	Super Ultra Low Emission Vehicle
TSI	TSI turbocharger: charging only with turbocharger



Term	Description
	TSI twincharger: charging with turbocharger and compressor
TGI	Charging with turbocharger and natural gas injection
TDI	Turbo diesel engine with direct injection
ULEV	Ultra Low Emission Vehicles
VDA	German Association of the Automotive Industry (VDA)
VW	Volkswagen
LongLife maintenance schedule	LongLife maintenance schedule
ZEV	Zero Emission Vehicle
ASM	Assembly



Cautions & Warnings

Please read these WARNINGS and CAUTIONS before proceeding with maintenance and repair work. You must answer that you have read and you understand these WARNINGS and CAUTIONS before you will be allowed to view this information.

- If you lack the skills, tools and equipment, or a suitable workshop for any procedure described in this manual, we suggest you leave such repairs to an authorized Volkswagen retailer or other qualified shop. We especially urge you to consult an authorized Volkswagen retailer before beginning repairs on any vehicle that may still be covered wholly or in part by any of the extensive warranties issued by Volkswagen.
- Disconnect the battery negative terminal (ground strap) whenever you work on the fuel system or the electrical system. Do not smoke or work near heaters or other fire hazards. Keep an approved fire extinguisher handy.
- Volkswagen is constantly improving its vehicles and sometimes these changes, both in parts and specifications, are made applicable to earlier models. Therefore, part numbers listed in this manual are for reference only. Always check with your authorized Volkswagen retailer parts department for the latest information.
- Any time the battery has been disconnected on an automatic transmission vehicle, it will be necessary to reestablish Transmission Control Module (TCM) basic settings using the Volkswagen Factory Approved Scan Tool (ST).
- Never work under a lifted vehicle unless it is solidly supported on stands designed for the purpose. Do not support a vehicle on cinder blocks, hollow tiles or other props that may crumble under continuous load. Never work under a vehicle that is supported solely by a jack. Never work under the vehicle while the engine is running.
- For vehicles equipped with an anti-theft radio, be sure of the correct radio activation code before disconnecting the battery or removing the radio. If the wrong code is entered when the power is restored, the radio may lock up and become inoperable, even if the correct code is used in a later attempt.
- If you are going to work under a vehicle on the ground, make sure that the ground is level. Block the wheels to keep the vehicle from rolling. Disconnect the battery negative terminal (ground strap) to prevent others from starting the vehicle while you are under it
- Do not attempt to work on your vehicle if you do not feel well. You increase the danger of injury to yourself and others if you are tired, upset or have taken medicine or any other substances that may impair you or keep you from being fully alert.
- Never run the engine unless the work area is well ventilated. Carbon monoxide (CO) kills.
- Always observe good workshop practices. Wear goggles when you operate machine tools or work with acid. Wear goggles, gloves and other protective clothing whenever the job requires working with harmful substances.
- Tie long hair behind your head. Do not wear a necktie, a scarf, loose clothing, or a necklace when you work near machine tools or running engines. If your hair, clothing, or jewelry were to get caught in the machinery, severe injury could result.
- Do not re-use any fasteners that are worn or deformed in normal use. Some fasteners are designed to be used only once and are unreliable and may fail if used a second time. This includes, but is not limited to, nuts, bolts, washers, circlips and cotter pins. Always follow the recommendations in this manual - replace these fasteners with new parts where indicated, and any other time it is deemed necessary by inspection.

Cautions & Warnings

- Illuminate the work area adequately but safely. Use a portable safety light for working inside or under the vehicle. Make sure the bulb is enclosed by a wire cage. The hot filament of an accidentally broken bulb can ignite spilled fuel or oil.
- Friction materials such as brake pads and clutch discs may contain asbestos fibers. Do not create dust by grinding, sanding, or by cleaning with compressed air. Avoid breathing asbestos fibers and asbestos dust. Breathing asbestos can cause serious diseases such as asbestosis or cancer, and may result in death.
- Finger rings should be removed so that they cannot cause electrical shorts, get caught in running machinery, or be crushed by heavy parts.
- Before starting a job, make certain that you have all the necessary tools and parts on hand. Read all the instructions thoroughly; do not attempt shortcuts. Use tools that are appropriate to the work and use only replacement parts meeting Volkswagen specifications. Makeshift tools, parts and procedures will not make good repairs.
- Catch draining fuel, oil or brake fluid in suitable containers. Do not use empty food or beverage containers that might mislead someone into drinking from them. Store flammable fluids away from fire hazards. Wipe up spills at once, but do not store the oily rags, which can ignite and burn spontaneously.
- Use pneumatic and electric tools only to loosen threaded parts and fasteners. Never use these tools to tighten fasteners, especially on light alloy parts. Always use a torque wrench to tighten fasteners to the tightening torque listed.
- Keep sparks, lighted matches, and open flame away from the top of the battery. If escaping hydrogen gas is ignited, it will ignite gas trapped in the cells and cause the battery to explode.
- Be mindful of the environment and ecology. Before you drain the crankcase, find out the proper way to dispose of the oil. Do not pour oil onto the ground, down a drain, or into a stream, pond, or lake. Consult local ordinances that govern the disposal of wastes.
- The air-conditioning (A/C) system is filled with a chemical refrigerant that is hazardous. The A/C system should be serviced only by trained automotive service technicians using approved refrigerant recovery/recycling equipment, trained in related safety precautions, and familiar with regulations governing the discharging and disposal of automotive chemical refrigerants.
- Before doing any electrical welding on vehicles equipped with anti-lock brakes (ABS), disconnect the battery negative terminal (ground strap) and the ABS control module connector.
- Do not expose any part of the A/C system to high temperatures such as open flame. Excessive heat will increase system pressure and may cause the system to burst.
- When boost-charging the battery, first remove the fuses for the Engine Control Module (ECM), the Transmission Control Module (TCM), the ABS control module, and the trip computer. In cases where one or more of these components is not separately fused, disconnect the control module connector(s).
- Some of the vehicles covered by this manual are equipped with a supplemental restraint system (SRS), that automatically deploys an airbag in the event of a frontal impact. The airbag is operated by an explosive device. Handled improperly or without adequate safeguards, it can be accidentally activated and cause serious personal injury. To guard against personal injury or airbag system failure, only trained Volkswagen Service technicians should test, disassemble or service the airbag system.

Cautions & Warnings

- Do not quick-charge the battery (for boost starting) for longer than one minute, and do not exceed 16.5 volts at the battery with the boosting cables attached. Wait at least one minute before boosting the battery a second time.
- Never use a test light to conduct electrical tests of the airbag system. The system must only be tested by trained Volkswagen Service technicians using the Volkswagen Factory Approved Scan Tool (ST) or an approved equivalent. The airbag unit must never be electrically tested while it is not installed in the vehicle.
- Some aerosol tire inflators are highly flammable. Be extremely cautious when repairing a tire that may have been inflated using an aerosol tire inflator. Keep sparks, open flame or other sources of ignition away from the tire repair area. Inflate and deflate the tire at least four times before breaking the bead from the rim. Completely remove the tire from the rim before attempting any repair.
- When driving or riding in an airbag-equipped vehicle, never hold test equipment in your hands or lap while the vehicle is in motion. Objects between you and the airbag can increase the risk of injury in an accident.

I have read and I understand these Cautions and Warnings.

